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# A forgotten architect of the Gilded Age: Josiah Cleaveland Cady's legacy

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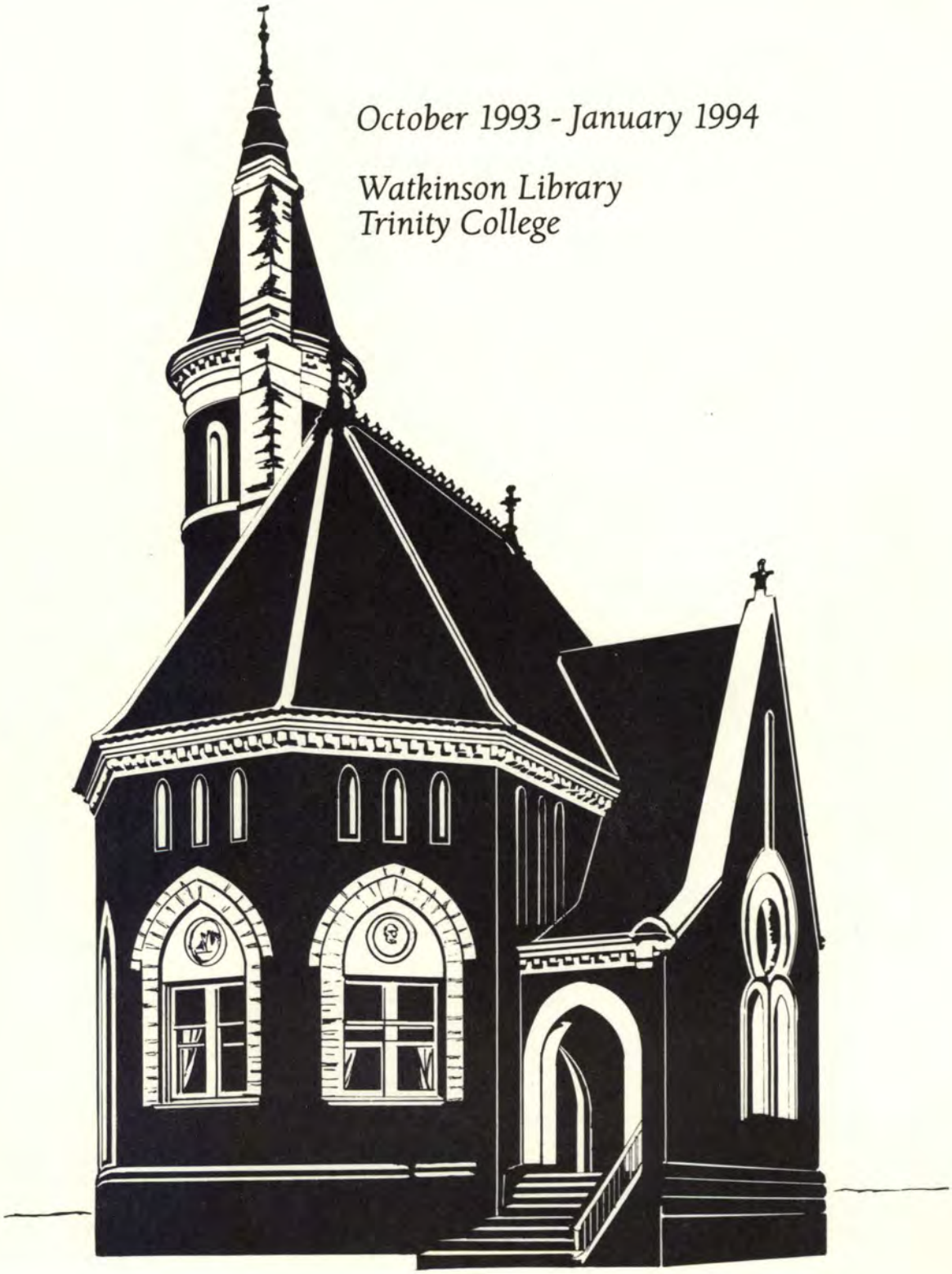

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# A FORGOTTEN ARCHITECT OF THE GILDED AGE: JOSIAH CLEAVELAND CADY'S LEGACY

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## Acknowledgements

This catalog and exhibition are the fruit of a seminar taught in the Spring of 1993 at Trinity College, on the life and work of the once well-known architect and Trinity alumnus, Josiah Cleaveland Cady. When Cady died in New York in 1919, he bequeathed his impressive architecture library to Trinity. It is now housed at the Watkinson Library. Using his library and scattered archives, it has been possible to reconstruct the life of this eminent and prolific architect. The research conducted in the course of the seminar served as the foundation for this catalog. My thanks are extended to the students for their intense semester's work and involvement. Our success was aided by the assistance of Tony P. Wrenn, Rare Books Librarian at the American Institute of Architects in Washington, D. C., and Joel Sweimler, Special Collections Manager, American Museum of Natural History. To those many individuals who allowed us access to Cady's buildings, I express my appreciation. At Trinity I wish to thank Dr. Jeffrey Kaimowitz, Curator of the Watkinson Library, for his patience and invaluable assistance, and Professors Alden Gordon and Michael Mahoney in the Department of Fine Arts for their academic and administrative support. There are two people whose contribution made this catalog and its accompanying exhibition at the Watkinson Library possible. Amy Cole spent much of the summer of 1993 in the design of the exhibition. To my husband, Patrick Pinnell, we owe the superb photography of Cady's buildings; his enthusiastic interest over the past months made the life of this fascinating architect come alive for me. The exhibition was generously supported by the Susan Tayor Goodwin Endowment of the Art History Program at Trinity College.

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Trinity College, Fall 1993

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Josiah Cleaveland Cady (1837-1919), an alumnus of Trinity College, was an eminent and prolific architect of late-nineteenth and early twentieth-century America. With his long-term partners, Louis DeCoppet Berg and Milton See, Cady designed many celebrated public buildings of the day, including the original Metropolitan Opera House, the American Museum of Natural History in New York, and the Brooklyn Art Association. Cady, Berg & See shaped some of the country's leading college and university campuses, designing no less than fifteen buildings at Yale, two at Williams College, three at Wesleyan University, and a church for the Hampton Institute in Hampton, Virginia, America's first college for Native and African-Americans. Trinity College possessed two buildings by Cady: Jarvis Hall, demolished in the 1960s, and the extant Saint Anthony Hall of which Cady was a member. In addition, the firm was responsible for many houses, churches, hospitals, tall buildings, libraries, and public baths throughout the Northeast. By 1897 Cady, Berg & See's body of work was of sufficient national prestige to warrant a thirty-seven-page article in Architectural Record by the incisive critic, Montgomery Schuyler, as an installment of the "Great American Architects" series.[1]

It is puzzling, then, why the firm is today all but forgotten. The destruction of many of their buildings is one probable cause of their eclipsed fame, but other historical factors are perhaps more accountable. Cady's work was overshadowed by that of his legendary exact contemporary, Henry Hobson Richardson, who introduced into Gilded Age America the "Richardsonian Romanesque," Richardson's personal design style, the influence of which spread swiftly and widely across North America and even to Europe. This "Richardsonian" manner drew on

[1] Mongomery Schuyler, "The Works of Cady, Berg & See," The Architectural Record 6 (1897): 517-553.

the Romanesque monuments of Southern France and Spain, which the architect infused with principles gleaned from his training at Paris's Ecole des Beaux-Arts. Cady's stylistic vocabulary was also chiefly Romanesque and round-arched, but he only partly owed a debt to Richardson's example. More careful analysis reveals a stronger, less expected underlying influence: the debates and buildings of nineteenth-century Germany. The revival of round-arched Romanesque and Early Christian architecture in Germany, the so-called Rundbogenstil, was well-known to Cady, Berg & See; indeed, both Cady and Louis Berg were both directly and indirectly German-trained. Their approach to design resulted in buildings which, if only occasionally as evocative and powerful as Richardson's, show high intelligence and an advanced awareness of metal construction, of ventilation and acoustics, and of exacting building craft, particularly in the use of brick and terracotta. Cady, Berg & See's artistic and cultural versatility and range is evident not only in their buildings, but in the impressive library Cady donated to Trinity College upon his death. Numbering over four hundred volumes, the library is one of the few intact architectural libraries of nineteenth-century America, allowing a rare glimpse into the working method of one of the era's major architectural firms.

## A Sketch of Cady's Life and Professional Activities

J. C. Cady was born in 1837 to Josiah and Lydia Cady of Providence, Rhode Island. He received his early education from Bacon Academy in Colchester, Connecticut, and Plainfield Academy in Plainfield, Connecticut. College archives reveal that Cady spent only one year (1857) at Trinity College as a "University" student, which allowed him to take courses with the class of 1860 without formally matriculating. He did receive from Trinity an honorary M.A. in 1880 and an

honorary LL.D. in 1905. Cady's activities following his time at Trinity are mostly a mystery, but the little we know is intriguing. In the period ca. 1857 to 1868, Cady embarked upon his architectural training, most of which probably occurred in New York. According to Schuyler, Cady received his technical training from "the professor of architecture of a German university, who, exiled for political reasons, was spending some time in this country."[2] The identity of the shadowy German professor is not known. Schuyler also mentioned that during this training period Cady studied watercolor with Alfred Fredericks, a skill useful to his architectural rendering technique, and worked for a time as a draftsman in "a New York office," probably the famous Greek Revival firm, Town & Davis.[3] Cady seems to have been employed as a paid draftsman for them between 1864 and 1868; in 1868 he opened his own office.

Between 1864 and 1881 Cady is listed in the New York City directories as having an office in the Trinity Building, at 111 Broadway in lower Manhattan. The now demolished Trinity Building, designed by Richard Upjohn (1851-52), acted as a kind of unorganized atelier for the dozens of architects populating the various offices there. Some of the well-known practitioners with a Trinity Building address included Richard Upjohn and his son Richard Michell Upjohn, Richard Morris Hunt, Charles Gambrill, Emlen Littell, and even, for a time, H. H. Richardson. In 1871 and 1873 respectively, Cady's two future partners, Milton See (1854-1920)[4] and

[2] Schuyler, p. 517.

[3] Talbot Hamlin, Greek Revival Architecture in America. New York, 1944, p. 144.

[4] According to Schuyler, Milton See, born in Rochester, N. Y. , was the son of Coles C. See, whose ancestors were early settlers of Westchester County. See entered Cady's office in 1871 from the office of Emlen Littell, also of 111 Broadway. After the turn of the century, See carried on work in association with his son, and during that period planned a number of ecclesiastical buildings, one of which was the Katonah Avenue Church in New York. Henry F. Withey and Elsie R. Withey, Biographical Dictionary of American Architects, Los Angeles, 1970.

Louis DeCoppet Berg (1856-1913),[5] entered his office. William S. Gregory (1865-1945) joined Cady, Berg & See as a student draftsman in 1892, eventually becoming a partner in the firm of Cady & Gregory from 1909, when the partnership with Berg and See was dissolved, to 1919, the year of Cady's death. Virtually nothing is known of Cady & Gregory's partnership.

When Cady began his office in New York City in 1868, the push to professionalize the practice of architecture in this country was gaining momentum. Until the 1850s formal architectural training in the United States had been nonexistent. With no opportunity to enroll in a formal course of study, most architects had apprenticed themselves to an older, self-declared architect. Less often they worked and studied with a formally educated immigrant architect, usually from England, but then increasingly from Germany or France. In 1857, the year Cady was enrolled at Trinity College, Richard Morris Hunt, the first American to have studied at the Ecole des Beaux-Arts in Paris, regarded here at the turn of the century as the finest architectural school in the world, organized his famous Tenth Street Studio in New York. It became a breeding ground for a whole new generation of professionally-trained American architects.

Cady seems to have had an education compounded of the traditional college instruction in trigonometry, geometry, and mechanics, alloyed with the training under the unidentified German architect. His partner, New York-born Louis DeCoppet Berg (who sometimes spelled his name "Bergh"), was, on the other hand, thoroughly German-trained. Berg studied eight years at the Militarisches Gymnasium (military grammar school) at Ostrowo, in Prussia; and he spent time at

[5] Louis DeCoppet Berg(h) was born in New York in 1856, the son of the organist and composer, Albert W. Bergh. Both Schuyler and Withey and Withey mention Berg's training at the Royal Polytechnical School in Stuttgart. A third source, Who Was Who in America, Vol. 1, 1960 edition, p. 87, goes further. Louis Bergh's entry reveals that he studied eight years at the Militarisches Gymnasium at Ostrowo, Prussia, and he attended the Moravian Institute in Lausanne, Switzerland, before the Royal Real-Schule and the Royal Polytechnical School in Stuttgart. He was, therefore, thoroughly trained in Central Europe.

the Moravian Institute in Lausanne, Switzerland, before he attended the Royal Real-Schule (science school) and the Royal Polytechnical School in Stuttgart, Germany. [6] It is impossible to prove precisely what individual roles Cady, Berg, and See played in the firm, but some evidence indicates that Berg acted as the firm's structural and mechanical engineer. He authored a handy construction series entitled Safe Building (numbering four volumes and published in Boston between 1889 and 1892), and he served as instructor and head of the architecture department at the Brooklyn Institute of Arts and Sciences. It was due to Berg's expertise that the firm received the hard-won commission for the Metropolitan Opera House in New York, as well as commissions for a host of building types that required high technical expertise. Indeed, one may argue that his likely contributions were as invaluable as that of the "chief designer" Cady. Milton See's role within Cady, Berg & See remains a puzzle, although he may have acted, at least initially, as more technician than designer. [7]

Eighteen fifty seven, the year Cady was enrolled at Trinity and Hunt opened the Tenth Street Studio, also marked the founding of the American Institute of Architects in New York City. Originally called the New York Society of Architects, the A.I.A. was in essence a New York organization that drew its members from the city and surrounding areas until 1867, when it introduced a system that spread chapters throughout the East and Midwest. Oddly, Cady's name was registered among the signers of the original constitution and by-laws of the A.I.A., but he did

[6] See previous footnote.

[7] See entered Cady's office in 1871, two years before Berg. A letter from Cady to Ethelbert S. Mills, a director of the Brooklyn Art Association (Sept. 28, 1871) was, therefore, probably refering to See when Cady suggested to Mills that he send his draftsman to a meeting he could not attend: ". . . I send my draughtsman, who has been engaged a good part of the summer on the minutiae of the work--ferreting out facts about the sewerage, drainage, measurements, etc., etc., in all of which he is painstaking and faithful. I do not send him to represent us in on any aesthetic point. . . for he is neither by nature or culture an artist – and does not design for me -- nor is he of weight in anything touching the general scope of the building for he is a man of technicalities -- minutiae -- and does not therefore readily take a broad view of affairs." Personal and Miscellaneous letters of J. Cleaveland Cady, Manuscripts Division, New York Public Library, hereafter cited as Cady Collection, NYPL.

not actually become a member until 1864. According to A.I.A. archives, Cady was an active member; from 1878 to 1882 he was on the board of trustees, and he served on various committees including the Committee on Colonial Architecture and the Committee for the Schedule of Professional Charges.

The A.I.A. was just one of many diverse organizations in which Cady was active. He was a member of the American Library Association, the Century and Alpine Clubs, the Fraternity Club, Delta Psi, and the Religious Education Association. He was an officer of the Quill Club for fifteen years; he served on the Board of Directors for the New York City Mission Society for seventeen years, and was Vice President for ten years. He was a governor of the Presbyterian Hospital, President of the Skin and Cancer Hospital, a trustee of Berea College, President of the National Federation of Churches, and a Superintendent of the Sunday school at the Presbyterian Church of the Covenant, a position he held for fifty-three years, and the one which, his son pointed out, was closest to his heart. Cady designed the Church of the Covenant, which still stands at 306 East 42nd Street. This impressive assortment of professional connections aided greatly in the firm's commission-gathering; despite Berg and See's talents and training, Cady was clearly the "front" man.[8]

## The Brooklyn Art Association

Cady's first big break as a young architect came in 1869, when he was awarded the commission for the Brooklyn Art Association, the mother institution of the Brooklyn Museum (Fig. 1).[9] In the 1850s, Brooklyn, the country's third largest city,

[8] For instance, although Schuyler's article is ostensibly about the firm of Cady, Berg & See, he always refers to "Mr. Cady."

[9] For a history of the Brooklyn Art Association as a cultural institution, see Clark S. Marlor, A History of the Brooklyn Art Associaiton with an Index of Exhibitors. New York: James F. Carr, 1970.

was not part of New York City. Cultural leaders such as Henry Ward Beecher, A. A. Low, and Richard Storrs desired their city to offer the amenities of other urban centers. In 1859 Leopold Eidlitz was commissioned to design the Brooklyn Academy of Music on Montague Street which opened in January 1861 (Fig. 2). The building heralded a new age for Brooklyn; its superb acoustics, musical offerings, as well as the splendid Gothic building with elaborate "Moorish" interior decoration made it the center of Brooklyn's cultural life. By the mid 1860s, two more public buildings would grace Montague Street: the Mercantile Library by Peter B. Wight and Cady's Brooklyn Art Association.

All three buildings were designed in the fashionable High Victorian Gothic style. The High Victorian or Ruskinian Gothic, named after the English art critic John Ruskin, was a popular style for public building in America in the years immediately following the Civil War. A characteristic of the Victorian Gothic was the increasing application of the Gothic style, usually reserved for churches, to city halls, museums, libraries, and all manner of public building. An important stylistic feature of the Victorian Gothic was the notion of "constructional coloration" or "structural polychromy" as seen in the medieval buildings of Northern Italy, popularized by Ruskin's The Seven Lamps of Architecture (1849) and The Stones of Venice (1851-53). Buildings achieved elaborate effects through the exterior use of colored materials, usually stone and brick. The polychromy was constructional or structural in its differentiation and emphasis of wall structure and elaboration around openings.

To designate the first of the Montague Street buildings, Eidlitz's Academy of Music, "Ruskinian" is not altogether correct. Although it possessed some polychromy, its long unrelieved walls were monochrome brick; and, many of the arches had pointed outsides or extradoses, but the inside curves or intradoses were

round, making it more Romanesque in feeling and thus revealing Eidlitz's Central European training.[10] The Brooklyn Art Association and the Mercantile Library, on the other hand, were much more elaborately colored and overtly Victorian Gothic. Peter B. Wight, the architect of the Mercantile Library (1865-1869), had designed the Academy of Design in New York in 1861, basing it loosely on the Doges Palace in Venice. The picturesque facade of the Mercantile Library consisted of a colorful combination of Philadelphia brick, light Ohio stone and dark Haverstraw sandstone.[11] The last of the three structures, Cady's Brooklyn Art Association (1869-1872), which contained artists' studios and exhibition space, was erected across Montague Street from the Mercantile Library, adjacent to Eidlitz's Academy of Music. Cady's building associate was Henry M. Congdon, whose father, Charles Congdon, was a member of the Association's Council. The Brooklyn Art Association appears to have been Cady and Congdon's sole collaboration.

In its details Cady's design bore a strong resemblance to William Burges's competition entry for the Law Courts in England of 1866, particularly in the patterning of the windows and their colored voussoirs. This would not be the only time that Cady would find inspiration in Burges's work. In 1872 Burges received the commission to design the master plan for Trinity College, his only American building project. His grand scheme of four adjacent quadrangles was only partially carried out, but Burges's understated use of colored stones and the employment of a stout simplified Gothic verging on the Romanesque set Burges apart and clearly

[10] These small but significant structural features, and the massing of the Academy of Music related it more to building in Germany, particularly to the Friedrich von Gärtner's Rundbogenstil along the Ludwigstrasse in Munich which the architect probably had in mind. Eidlitz was trained at the Vienna Polytechnical School, but he arrived in 1843 in this country, where he worked for a time with Richard Upjohn. His early Romanesque work is reminsicent of Gärtner's; the music academy's projectionless facade with flush window treatments is strikingly similar to to the flat, parade-like character of the Ludwigstrasse.

[11] Sarah Bradford Landau, P. B. Wight: Architect, Contractor and Critic, 1838--1925. Chicago: Art Institute of Chicago, 1981.

informed Cady's similar approach at Trinity's Saint Anthony Hall, completed a few years later, in 1878 (Fig. 3).

The Brooklyn Art Association and Saint Anthony Hall were unusual in Cady's oeuvre in the employment of modern Gothic. The issue of style, however, served an urban purpose. In cacophanic collaboration, Cady's, Eidlitz's and Wight's vivid edifices were unified by the rhythmic Gothic arches in order to reinforce Montague Street's identity as a monumental thoroughfare. In keeping with the nineteenth-century view of cities as works of art, many old and some new cities erected grand boulevards or triumphal ways: for instance, London's Regent Street, Paris's Rue de Rivoli, Munich's Ludwigstrasse, Berlin's Unter den Linden, and Vienna's Ringstrasse all offered great commercial, cultural, and domestic quarters for their citizens' enjoyment and sense of local pride. Montague Street came closest in conception to Ludwig I's Munich as both it and the Ludwigstrasse (1828-44) were long axial streets with a mix of cultural and educational buildings disposed on both sides. Both the Ludwigstrasse and Montague Street were unified by the rhythmic repetition of facade arches, semi-circular on the Ludwigstrasse, pointed in the case of Montague Street. The similarity was not coincidental, since the Ludwigstrasse probably served as the urban model for Montague Street. Upon the opening of the Mercantile Library, A. A. Low compared the edifice to Friedrich von Gärtner's State Library on the Ludwigstrasse (Fig. 7) and its pedagogical influence on the citizens of Bavaria and Europe. The New York Times reported:

Mr. A. A. Low said that now they had a building [the Academy of Music] and a library which, with other attractions in Brooklyn, would exert a large influence in drawing people there to live, and for that consummation they were indebted to the hand of young men in whose hands the small beginning had been developed into a thing of grandeur and usefulness. He alluded to the importance of the great library at Munich, in its influence upon the people not only of Bavaria, but Europe at large. That and other libraries of Europe were expressive of the will of royalty and nobility,

but here our libraries were indicative of the literary and exalted tastes of he people, their genius and their generosity. [12]

As the hub of artistic culture in Brooklyn, Montague Street's rich concentration of a major art gallery, academy of music, and public library was an extraordinary achievement at the time, blessing the young Cady with early professional visibility.

Cady in the 1870s:

When the Brooklyn Art Association opened in 1872, Cady's career was expanding and taking shape. His known buildings from the 1870s were largely academic in nature and all executed outside of New York. In 1871 and 1873 his eventual longterm partners, Milton See and Louis DeCoppet Berg, entered his office. Both were only seventeen years old. Despite his youth, Berg's extraordinary German training and education must have immediately propelled the direction of the firm, for the North Sheffield School (1872-73; Fig. 4), Cady's first building at Yale, was his most strictly Germanic.

With the general awakening of interest in the natural and physical sciences in the first half of the nineteenth century, some scientists at Yale began to take seriously the rudimentary level of scientific and technical education in this country. Whereas several colleges offered to teach the fundamental principles of mathematics and physics that lie at the base of civil engineering, only two institutions offered graduate degrees in military and civil engineering: the Military Academy at West Point and Rensselaer Polytechnic Institute, the latter of which graduated its first class in civil engineering in 1835. A direct result of the general cry for the recognition of science as part of a liberal education came in 1846 when the Yale Scientific School,

[12] "Brooklyn Mercantile Library," The New York Times January 19, 1869, 8:3.

later named the Sheffield Scientific School, was founded.[13]

Through the course of his career, Cady designed three buildings for the Sheffield Scientific School: North Sheffield School; Winchester Hall (1892-93; Fig. 5); and the Sheffield Chemical Laboratory (1894-95; Fig. 6). Only the recently renovated latter building survives (51 Prospect Street), the other two having been destroyed in 1968 to make way for Marcel Breuer's elephantine Becton Laboratories Building.[14] The earliest, North Sheffield Hall (Fig. 4), furnished a model for the latter two buildings. It was a simple brick cube with finely crafted masonry culminating in the prominent arcuated corbelling at the cornice. The laconic rhythm of the facade's round arches, the Romanesque cornice, and the razor-edged sharpness of the corners bore a striking resemblance to such German Rundbogenstil buildings as Friedrich von Gärtner's State Library on the Ludwigstrasse in Munich, which served as an urban model for Montague Street (Fig. 7). A remnant of the Brooklyn Art Association's polychromy was visible in the voussoirs and in the upper regions of the wall, but the building was unusually calm by comparison with the architectural excesses normal to the 1870s.

North Sheffield's reductionalist, functional spirit made it a great success with the scientists, several of whom had been trained in Germany. George J. Brush, a professor of metallurgy and a member of the committee who hired Cady, had studied at the University of Munich, the building of which was also designed by Gärtner and stands on the Ludwigstrasse across from the State Library.[15] Brush's visual familiarity with the German Rundbogenstil and its academic associations may have assisted Cady's selection as architect. Schuyler claimed that the building

[13] Russell H. Chittenden, History of the Sheffield Scientific School, 1846-1922. New Haven: Yale University Press, 1928.

[14] For a discussion of Winchester Hall and Sheffield Lab, see section below on Cady's academic buildings of the 1880s and 1890s.

[15] Chittenden, p. 64 and p. 177.

committee exacted such tight control over the building's design that they would not even inform Cady where the building was to stand or what institution was building it! Cady's undemonstrative brick building was an intelligent solution to the vague overscrupulousness of the cautious scientists.[16]

George Brush and W. P. Trowbridge, head of the engineering department at the scientific school and superintendent of the Novelty Ironworks of New Haven, acknowledged their debt to Cady and their great satisfaction with North Sheffield Hall:

> The building is considered a complete success; great surprise is expressed that with so simple an external form -- a mere cube -- such an admirable architectural effect has been produced, and the interior arrangements are so simple, complete and substantial, that everyone is impressed with the fact, that nothing has been sacrificed to mere decoration, but everything is for use. We feel we are greatly indebted to your thoughtful study of the whole problem. You have furnished a substantial, common sense building, massive, but elegant in design, and pleasingly artistic in its general appearance, while it is thoroughly well adapted for the uses of our institution.[17]

Another professor at North Sheffield, the renowned paleontologist, Othniel Marsh, may have had a role in Cady's selection at North Sheffield, for he certainly was responsible for Cady's next two commissions in New Haven, the Peabody Museum of Natural History (1873-76; Figs. 8-9) and the Othniel Marsh House (1878; Fig. 10) at 360 Prospect Street, which now houses part of the Yale School of Forestry. Marsh, famous as the discoverer and namer of the brontosaurus, was a professor at the Sheffield School from 1866 to 1879, when he left his duties to become curator of geological collections at the newly erected Peabody Museum. Marsh was the fortunate nephew of the London banker, George Peabody, who, in 1866, gave

[16] Schuyler, p. 521.

[17] Letter from George Brush and W. P. Trowbridge to J. C. Cady, May 15th, 1873, Cady Collection, NYPL.

$150,000 "to found and maintain a Museum of Natural History, especially of the departments of Zoology, Geology, and Mineralogy, in connection with Yale College in the city of New Haven, State of Connecticut." [18] Cady was a close acquaintance of Othniel Marsh, to whom he referred as "the bone and fossil man," but whether the friendship led to, or followed from, the building activity is unkown.

The original Peabody Museum stood at the corner of Elm and High Streets, land now occupied by Branford College, near Russell Sturgis, Jr.'s, Bruce Price's, and P. B. Wight's pre-existing High Victorian Gothic buildings of the 1860s. Gothic thus prevailed as a semi-official style. As originally conceived, the Peabody was not unlike other monumental projects for Victorian Gothic builidings, for example Smithmeyer and Pelz's 1874 competition entry for the Library of Congress. Both were rectangular, symmetrical buildings with ornate advancing centers flanked by towers, and with two projecting end pavilions linked to the center by multi-bayed arms. The likeness to the Smithmeyer and Pelz project ends with the massing; notwithstanding the Ruskinian flavor of both designs, Cady's is much more staid. As at North Sheffield, the end pavilions are crisp brick cubes, the windows and upper stages of which are sparingly relieved by structural color. Contextual issues dictated the use of Gothic at the Peabody Museum, but it was to be Cady's next to last building in that most popular style of post-bellum America. The building's awkwardness resided in the fact that only the north end pavilion, with its multi-bayed "arm," was erected, endowing it with a clumsy asymmetry it was never intended to possess (Fig. 9).

One final Yale-connected building by Cady from the 1870s was the house he designed for Othniel Marsh, which served as a miniature Peabody Museum (Fig. 10). The round-arched brownstone house with decorative tile-hanging showed the

[18] Chittenden, pp. 107-112.

influence of Richardson's domestic work of the 1870s in Newport and, indirectly, the influence of the English Arts and Crafts architect, Richard Norman Shaw. Relatively modest in scale, a large central octagonal reception room served partly as exhibition space for Marsh's renowned fossil collection.

Cady was to design twelve more buildings for Yale College, more than any architect prior to James Gamble Rogers' campus-transforming projects in the late nineteen-teens, -twenties, and -thirties. But a decade would lapse before Cady's academic work was re-activated. In the meantime, his Yale experience served him well in what were to become the two most important commissions of Cady, Berg & See's production: the Metropolitan Opera House and the American Museum of Natural History. The round-arched functional brick cube of North Sheffield Hall would later reverberate in the Met design, and the challenge of the Peabody gave him the design experience and social connections necessary to complete the largest natural history museum in the country.

One final building from the late 1870s deserves special attention in an overview of Cady, Berg & See's body of work: Saint Anthony Hall, built in 1877-78 by Trinity College's Epsilon Chapter of the national fraternity of Delta Psi for use as Chapter headquarters (Fig. 3). The building continues to serve this purpose. When Cady attended Trinity in 1857, the college still resided in downtown Hartford on the site now occupied by Richard Michell Upjohn's Connecticut State Capitol building (1872-80). Abner Jackson, the Trinity president who manoeuvred the purchase of, and move to, the present-day site, had also skillfullly retained the eminent English architect, William Burges, as master planner in 1872. Burges's visionary design, in the end sadly truncated by the tiresome and eternal problem of exhausted finances endemic to academic architecture, was nonetheless impressive enough to inspire those who worked in its ambience, including Cady and Henry Hobson Richardson,

who completed the Cheney building in downtown Hartford in 1876.

The money needed to design the fraternity house was donated by Robert Habersham Coleman, an alumnus trustee and a former classmate and Saint A's brother of Cady's while at Trinity. Placement of the new fraternity house so near the campus broke precedent, as most chapter houses were established in downtown Hartford. The building's siting on the corner of Summit Street and Allen Place, near the Burges complex, forced recognition and acknowledgement of Burges's example.[19]

Departing from the traditional "tomb-like" structures of fraternities at other schools--Yale, for example--Cady's design was more a cross between a house and fortress. The volumes are simple: a deep polygonal apse, perhaps intending to recall octagonal medieval chapterhouses where abbot or prior and members of a monastic community gathered both to hear read their order's Rule and to discuss business, abutted a rear rectangle. The conical tower on the north elevation and the steep, slightly flared roof are primarily responsible for the French medieval flavor of the building. The massing was not unlike Burges's own residence, Tower House, in London (1875), which Cady must have known, although there the material was red brick. The quarry-faced granite of Saint Anthony was grayer in cast than the alternating dark and light brown polychromy of Burges's Trinity buildings. Despite the ostensible similarity of style, a muscular Gothic bordering on the Romanesque, Cady's Saint Anthony Hall was more monochrome in color and sharper of detail, betraying his distrust of ornamental flourishes. It was to be his last essay in the Victorian Gothic, which he relinquished in the 1880s for the Romanesque, a style to which he was temperamentally suited and one which, given Cady's training and Richardson's advancing popularity, made it increasingly impossible to ignore.

[19] Glenn Weaver, The History of Trinity College. Hartford: Trinity College Press, 1967, p. 214.

## The Metropolitan Opera House

Cady's place in American architectural history was assured with the firm's competition-winning designs for the Metropolitan Opera House (1881-1884; Figs. 12-14) and the American Museum of Natural History (1888-1899; Figs. 17-19). The former was the most talked about building in New York for a number of years after it opened in 1884. Although the "world of fashion" Edith Wharton described in the opening of her novel The Age of Innocence was "still content to reassemble every winter in the shabby red and gold boxes of the sociable old Academy [of Music]" at Union Square, designed by the German-born and -trained Alexander Saeltzer in 1854 (Fig. 11), private interest groups pressed for a new house. Despite the supposed superior acoustics and visibility of the older Academy, it possessed only eighteen boxes, nine on each side of the proscenium (Fig. 12). The limited number of boxes was reserved for the old "Knickerbocker" aristocracy of the city, such as the Goelets and the Astors; however, the new fortunes of railroading, banking and real estate, notably the Vanderbilts and Morgans, stood ready to support the arts. They demanded a new opera house with greater numbers of boxes--to see--and to be seen.[20]

Four firms were invited to submit designs: George B. Post, Potter and Harrsion, G. E. Harvey, and Cady, Berg & See. Cady's design, submitted under the name "Lyre," won, according to all accounts, because it offered comparatively

[20] For the history of the Metropolitan Opera House, see Marianna G. van Rensselaer, "The Metropolitan Opera House, New York," American Architect and Building News V. 15, 1884, pp. 76-77 and 86-89; Martin Mayer, The Met: One Hundred Years of Grand Opera. London: Thames and Hudson, 1983; and Paul E. Eisler, The Metropolitan Opera. New York: North River Press, Inc., 1984.

inexpensive construction costs, extensive fireproofing,[21] and the inclusion of other functions in the complex. The building as built fulfilled its promise of efficiency and functionality, although at the sacrifice of a certain monumentality evident in the contemporary grand houses of Europe, such as Gottfried Semper's Dresden Opera House (1878) and Charles Garnier's Opera in Paris (1861-75; Fig. 15). Part of the lack of elegance was dictated by the less than glamorous site: the blocks bounded by Broadway and Seventh Avenue, and 39th and 40th Streets. The material was a finely crafted light yellow brick with sparse amounts of similarly-toned terracotta. The elegant round-arched facade (Fig. 13), essentially a-historicist in nature, was referred to as Italian Renaissance because of the association with Italian opera and the general effect of "quietness, good taste, and reticence." [22]

Its clever plan manifested Cady's tendency to squeeze together different functions into an urban whole. The main four-storied entrance pavilion was flanked by two taller towers which housed shops on the ground floor, ballrooms and restaurants above these, and bachelors' apartments on the top. One walked into a comfortable but small vestibule before entering the auditorium; missing were the pageantry of movement and the hierarchy of spaces present in the Paris Opera. Also missing was lavish interior decoration: no funds were expended for costly stones and marbles. Simple, flat tones of yellow, gold, and red predominated, with some Renaissance-inspired decoration by E. P. Treadwell of Boston.

The most remarked upon feature of the building was the rear of the building

[21] In an article on the history of iron construction, Louis Berg claimed that the Metropolitan Opera "was the first building probably in the world to introduce fan ventilation, furnishing to every seat a supply of fresh air, so it was also the first absolutely fire-proof theatre in the world. Not only was the ordinary iron construction used, but even the galleries were constructed of iron, though nearly every beam had to be bent to a different shape; the ceiling and stage galleries were iron; and, what at the time was claimed to be an impossibility, iron supports for the stage were invented, to be removable at will, and interchangeable." Louis DeCoppet Berg, "Iron Construction in New York City," The Architectural Record I (1891-92): p. 459.

[22] van Rensselaer, p. 76.

which loomed 150 feet high (Fig. 14). Cady made no attempt to aestheticize the features of the huge gabled facade, which expressed the volume of the enormous auditorium in one grand sweep. A rose window and two supporting buttresses endowed it with a slight ecclesiastical appearance, but windows and doors were placed according to simple need. The result caused its comparison with a "yellow brick brewery." The critic Marianna van Rensselaer eloquently defended against the attack:

> A malt house or a grain elevator is not apt to be an imposing sight, and there are persons, I regret to say, who compare the rear view of the opera house to one of these two things. But it is very different from either, and he who cannot appreciate the particular beauty it presents will hardly be able to appreciate in any case two of the chief merits an architectural work can possess: the dignity of quiet size and the force of good structural designing. The immense wall is not like a brewery wall, even apart from the strength secured by the rarity of its openings, for it is designed, and not simply built. . . . It does not pretend to be anything but what it is, the back of an opera house, built of such immense size simply for the accommodation of the complex apparatus of modern scenic effects. One cannot judge it as one would a facade planned for architectural effect, but being what it is, it is extremely good -- good in the same way that the great medieval warehouses of Germany, for example, are excellent, and far, far better than most of our structures put up with every ambition after architectural effectiveness. [23]

The Metropolitan Opera House was the largest in the world when completed, its auditorium measuring 85' 8" X 95' 6" and with a seating capacity of 3500. In plan the Met was most often compared with La Scala in Milan in the manner that the auditorium was relatively free of visual encumbrance (Fig. 12). The usual horseshoe shape was altered slightly to include a gentle, lyre-like curve at the ends where the box tiers approached the stage. There were no proscenium boxes but simply tiered auditorium boxes of similar size so that all of the stockholders were given equal access to opera viewing, social exchange, and self-display before the hungry audiences. One awkward result of this judicious arrangement was the way in which

[23] Ibid., p. 77.

the boxes abruptly abutted the pilasters of the proscenium, but generally speaking, Cady's opera was viewed favorably by the architectural press as well as those whose social ambitions it mirrored.

In an article in Opera News in 1941, Louis DeCoppet Berg(h)'s sister, Lillie d'Angelo Bergh, emphasized the important but insufficiently unacknowledged contribution of Berg, who, more than Cady, possessed the necessary engineering training to design an opera house. Indeed, Berg's German training was probably the key ingredient that won the commission for the firm, for the sophisticated fire prevention and ventilation features revealed his expert hand. Furthermore, the Berghs were a musical family: the father was a well-known organist at the Episcopal Church of the Transfiguration in New York, and Ms. Bergh studied singing in Italy with De Reszke, at which time she claimed to have sent her brother pictures of opera houses and some valuable suggestions.[24] Although his library contained an impressive collection on opera design, including a deluxe edition of the Paris Opera House (Paris, 1876-81; the gem of the Cady library at Trinity; Fig. 15), and an illustrated book on the competition for the Concerthaus in Leipzig (Berlin, 1880), Cady openly admitted that he lacked expertise in theatrical construction in a letter to Gordon L. Ford, the business manager of the New York Tribune:

I have a building in the works involving stage and operatic arrangements with which I am not very familiar and desire to look at the arrangement of some buildings fitted for this purpose. I have thought of the [Eidlitz's] Brooklyn Academy of Music for one. Can you loudly give me a line that will give me admittance "behind the scenes" -- in the daytime to examine matters. [25]

Despite the sophisticated fire-proofing system, the Metropolitan Opera House

[24] Opera News V. 5, no. 21 (March 10, 1941): 4-9. See also the obituary for Lillie Bergh, The New York Times, July 13, 1941, 29:2.

[25] Letter from Cady to Gordon L. Ford, August 4, 1880, Gordon L. Ford Collection, Manuscripts Division, New York Public Library (hereafter cited as Ford Collection, NYPL).

fell victim to fire on August 27, 1892, mainly due to an empty water tank and abandonment of the clumsy sprinkler system. The house was rebuilt and then further refurbished in 1903 to the designs of Carrère & Hastings. Despite the genuine affection for the Cady building, 1965-66 was the last season in the old house, when The Met moved to the now present location at Lincoln Center and the building was demolished.

## The American Museum of Natural History

The American Museum of Natural History, the West 77th Street facade of which Cady, Berg & See designed (1888-1899; Figs. 17-19), is probably the firm's best-known work. Planned In conjunction with the Metropolitan Museum of Art, it represented a key moment in New York's increasing cosmopolitanism. The United States was relatively slow in showing the nineteenth-century penchant for museum building and collecting. Already in the eighteen teens and twenties, Germany, France, and England had seen the birth of private and public art collections opened to an increasingly acculturated public. The pedigree of the natural history museum, though, existed in the interest in the collection of the "rare and peculiar" popular in the sixteenth and seventeenth centuries. Often collectors would store their snake skins, turtle shells, seashells, and bones in a "cabinet of curiosities," a small room or cabinet designed especially for that purpose.

In the Age of the Enlightenment, the collecting of exotica came out of the closet, and individuals like Thomas Jefferson began to incorporate natural history collections in their homes. For instance, at Monticello, Jefferson's late eighteenth-century home in Charlottesville, Virginia, he displayed specimens from the Lewis and Clarke expedition as well as Indian artifacts and mastodon bones in the entry

vestibule. The artist and naturalist, Charles Willson Peale of Philadelphia, began as early as 1788 collecting natural history specimens. In 1794, in the former headquarters of the American Philsophical Society in Philadelphia, Peale opened to the public his natural history collection, which, by 1805, sported ninety species of mammals.[26] Peale's collection also included birds arranged in glass cases with painted landscapes of their natural habitats in the background, insects, minerals, and a room of ethnology with wax figures of Native Americans and South Sea Natives. In 1801 Peale led an excavation near Newburgh, New York, that resulted in the unearthing of a mastodon, the first fossil skeleton ever mounted in America. As such Peale's museum was the first, if unofficial, museum in this country.

When discussions first began to open a museum of natural history in New York in the late 1860s, Boston, Philadelphia, Chicago, and Washington, D.C. (the Smithsonian Institution) all already possessed one. An act to incorporate the museum passed the New York Legislature on April 6, 1869, and the American Museum of Natural History was founded. On May 5th, the Board of Commissioners of the Central Park was authorized "to erect, establish, conduct and maintain on the Central Park, a Meteorological and Astronomical Observatory, a Museum of Natural History and a Gallery of Art, and the buildings therefor. . . ." [27] Thus from their founding, the Metropolitan Museum and the American Museum of Natural History were envisioned as sister institutions, not unlike Gottfried Semper's and Carl Hasenauer's roughly coeval Museums of Art and Natural History in Vienna (1874-88).

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[26] Charles Coleman Sellers, Charles Willson Peale. New York: Charles Scribner's Sons, 1969.

[27] Fifth and Sixth Annual Report of the American Museum of Natural History, December 1, 1874, p. 40. For a history of the AMNH see various annual reports; Henry F. Osborn, The American Museum of Natural History. Plans for Future Building and the Arrangement of Collections, May 1912, Archives of the AMNH. For a good summary of the history of the Metropolitan Museum of Art, see Morrison H. Heckscher, "Hunt and the Metropolitan Museum of Art," The Architecture of Richard Morris Hunt. Susan R. Stein, editor, Chicago and London, 1986, p. 173-187.

The first site offered to the American Museum was on the east side of Central Park between 79th and 84th Streets, where the Metropolitan now stands. The home eventually chosen, though, was on the west side of the park, a site called Manhattan Square, eighteen acres in extent, and lying between 77th and 81st Streets and Central Park West and Columbus Avenue. In 1872 the Board of Commissioners awarded the commission to Calvert Vaux (also the architect of the original Metropolitan Museum), along with Jacob Wrey Mould. Vaux was given the commission for the Metropolitan because of his role in the laying out of Central Park with the landscape architect Frederick Law Olmsted in 1858; the awarding of the natural history museum commission was possibly for similar reasons.

Vaux and Mould drafted an elaborate master plan for an impressive fifteen-acre complex (Fig. 16). It consisted of a hollow square, 700 feet on a side, connected by four arms forming a Greek cross and radiating from a central octagon, not unlike J. N. L. Durand's scheme for an ideal museum, published in the summaries of his lectures at the Ecole Polytechnique, the Précis des leçons, beginning in 1802. The style was Ruskinian Gothic, the same as the original Metropolitan Museum and Cady's Brooklyn Art Association. Thus the natural history museum and the "painting gallery" across the park from each other were visually balanced within their park settings.

The only part of Vaux and Mould's plan to be realized was the arm of the Greek cross extending from the central octagon to the south or 77th Street facade; this building still remains, although obscured, by Cady's later edifice. Its construction began in 1874, and the building opened in 1877. As completed it was a four story brick and granite building with exhibitions arranged in parallel, stacked cases or alcoves, a common interior arrangement for public libraries and museums. Within years the building proved too small, but it was not until 1886 that an addition was

approved. In 1887 a select group of architects including Cady, Berg & See was invited to submit plans for the "main entrance building" of the museum. Why the 77th Street facade and not the facade facing Central Park was chosen as the chief entrance is unclear. It is also puzzling why Vaux and Mould were not retained as architects. Perhaps by the late 1880s their work was viewed as old-fashioned, although their master plan was followed closely. Cady, Berg & See's master plan (Fig. 18), although never followed through, adhered to the same formula of a Greek cross, with octagonal drum over the crossing, all inscribed within a square. There were, however, many differences in the treatment of the pavilions and smaller rooms.

There was also a difference in style. Cady's modern building revealed the obvious influence of Henry Hobson Richardson in its rock-faced Romanesque walls, but the details evinced a different sensitivity, which was, not surprisingly, attributable to Germanic training and Berg's engineering expertise (Fig. 20). The long 710 foot facade was remarkably open due to the large amounts of iron beneath the red granite facing -- a contrast to Richardson's monolithic wall construction. The overall tectonic effect was achieved in two ways: the laying of the granite blocks and, more importantly, by the relationship of the load and non-load- bearing parts to each other. The method of stone laying was pseudisodomic, a method used by the ancient Greeks and Romans and often preferred by Cady's firm. Thin and thick courses of evenly cut stone alternated, endowing the facade with a much more regular, less picturesque appearance that Richardson's random ashlar wall treatments. In order to organize the long frontage, tall thin turrets punctuated each two or three bay unit, seamlessly piecing the facade together. Within each unit, windows and columns were logically stacked, and underneath the windows smooth granite panels were recessed in order to denote their passive, non-carrying role. Within this complex system of point and counterpoint, the sum effect was of a flawlessly ordered

entrance wing of great drama and logic. Cady, Berg & See had successfully created the longest public building facade in New York City.

The philosophy and interior arrangement of the museum also reflected new technical and conceptual approaches in museology. Albert S. Bickmore, a founder of the American Museum of Natural History, instituted two revolutionary approaches to the use and arrangment of the museum. The first approach concerned public and scholarly specialization. On the model of William Henry Flower, Director of the British Natural History Museum in London, Bickmore promoted "the New Museum Idea," whereby conscious and strict separate accommodations would be made for the serious researcher and the public at large. In private areas of the museum the researcher would have access to vast numbers of specimens, easily retrieved by improved storage facilities. The public would visit the galleries where exhibits, usually displayed haphazardly, would be carefully pruned with informative didactic labeling.[28] Bickmore's mentor at Harvard, the Swedish naturalist, Louis Agassiz, had encouraged implementation of the "idea exhibit" whereby specimens would be exhibited in ways that would enhance understanding of their structure, development, and living habits. The animals, for instance, were naturalistically placed in their habitats, often with detailed landscape murals placed behind them. The seemingly live specimens, a result in advances in taxidermy, would be shown living, eating, mating, thus creating wonder and excitement in the viewer. [29]

Only the 77th Street facade and one small addition to the American Museum of Natural History were executed by Cady, Berg & See. A host of building campaigns followed in the 1920s, chiefly by architects Trowbridge & Livingston, and, in 1935, by

[28] Susan Sheets-Phyenson, Cathedrals of Science: The Development of Colonial Natural History Museums During the Late Nineteenth Century. McGill's-Queen's University Press, Kingston and Montreal, 1988, pp. 4-7. Kenneth Hudson, Museums of Influence. Cambridge and New York: Cambridge University Press, 1987, pp. 69-72.

[29] Laurence Vail Colemen, The Museum in America: A Critical Study. Vol. 1-3, Washington, D. C., The American Association of Museums, 1939, V. 2 pp. 260-63.

John Russell Pope, whose magnificent but completely incongruous Beaux-Arts classical wing commands the view of Central Park West. The Columbus Avenue and West 81st Street elevations are gaping holes, rendering a distant prospect the elegant unity of effect achieved at the the American Museum of Natural History's sister institution, the Metropolitan Museum.

Ecclesiastical Building

Of the many and diverse buildings and building types with which Cady experimented, the churches deserve special attention since they were the group of which he was most proud. Montgomery Schuyler agreed with Cady's own assessment when he declared that the churches were "the most serious and successful" of the firm, particularly as essays toward the solution of the modern Protestant church.[30] In order to understand the religious and architectural context of this series of building, some historical background is useful.

Our secularized age has, perhaps, blinded us to the eminence of church design in the previous century in expressing social change. Whereas ecclesiastical design tends to follow rather than lead in this century, in the nineteenth century the opposite was true. Churches and synagogues were centers of civilization as well as public assembly and were often the first building types to reflect societal reform. Such reform was rampant in the nineteenth century, when, beginning in the 1830s, church leaders began to express dissatisfaction with the lethargy typical of the church in the eighteenth-century's Age of Reason secularism. A new religious fervor spread, causing renewed interest in the historical and spiritual foundations of individual confessions and resulting in unprecedented fractiousness and

[30] Schuyler, p. 542-43.

fragmentation. The Church of England split between High and Low Church parties whose internal politics were so often mirrored in the novels of George Eliot and Anthony Trollope. With the passing of the Reform Bill and other efforts toward religious tolerance and political representation, Non-Conformist or Dissenting groups like the Congregationalists, Baptists, Presbyterians, and Methodists freshly re-examined the historical tenets of their faiths.

It is not surprising, then, that such reform found architectural expression. In an age of historicism, each group had an unprecedented plethora of styles from which to choose. Through his books Contrasts (1836) and True Principles of Christian or Pointed Architecture (1841), Augustus Welby Northmore Pugin kindled interest in English fourteenth-century Gothic, which he espoused for the building of new churches. Although he was a Catholic convert, Pugin's ideals were taken up most markedly by the Ecclesiological Society, a group of undergraduates at Cambridge University who applied his principles to the High Church arm of the Anglican Church. Beginning in the 1840s hundreds of new parish churches dotted the English rural landscape. The churches were ideally of roughly-coursed stone and were designed in the so-called Decorated Gothic. Interior arrangements consisted of deep chancels separated from the nave by stairs and rood screens. Splendidly outfitted chancels contained the altar and emphasized the strict separation of clergy and laity, the latter of which were restricted to the nave area, catching only a glimpse of the holy of holies.

Different developments were taking place among groups like the Presbyterians, Congregationalists, Baptists, and even Low Church Anglicans who valued preaching over ritual and wanted big auditorium-like spaces in which all could share equally in worship. Religious space was viewed more for the purposes of social assembly and often included classrooms and other multi-purpose rooms.

Religious orientation was also reflected in the style of building. Because they desired a form of worship that more nearly reflected the "primitive" church, the church as it existed in the Early Christian period, the earlier, more severe Romanesque or Early Christian styles were preferred over the Gothic. In 1844 the American architect Richard Upjohn introduced the Romanesque Revival to this country in two churches built by Congregationalists, the Church of the Pilgrims in Brooklyn, New York (1844-46), and the Bowdoin College Chapel in Brunswick, Maine, (1844-55). Within a few years the Romanesque spread widely, vying in popularity with the Gothic as the style of choice for evangelical groups.

J. C. Cady was a devout Presbytherian, as is evident in the number of church organizations of which he was a member throughout his life. As a result most of his approximately twenty-five known churches were Presbyterian, and all but a handful were Romanesque or round-arched. An analysis of Cady's churches over a twenty-year period reveals a striking coherence and logic in approach, one dependent upon function and urban setting. Viewed as a series, the churches display more than any other building type tackled by the firm how to solve a "problem," in this case the problem of modern public assembly.

Cady, Berg & See's churches may be divided into three general groups: small, rural churches; churches in the centers of small towns; and large urban churches usually set within complex sites. The rural churches formed the smallest group. Picturesquely ensconced within woodland settings, these churches were modeled after English parish churches. They were Gothic in style and were either made of random stone ashlar (the Alpine Community Church, 1867; the Church of the Holy Communion, 1886-88, both in Norwood, New Jersey) or they were designed in a peculiarly American adaptation thereof, the so-called "Stick Style," so named by the architectural historian, Vincent J. Scully, Jr. Scaled similarly to the rural Gothic

churches, but consisting of elaborate clapboard construction, the Stick Style churches were three in number: the Church in the Adirondacks, Racquette Lake, New York; First Presbyterian Church in Oyster Bay, New York, 1873; and Plantsville Congregational Church in Southington, Connecticut, 1866.

More typical of Cady's venturesome spirit in wrestling with the problem of the "modern Protestant church," are his numerous designs for churches in small towns. These were usually situated in the center, alongside the greens, and were quite large, displaying Cady's penchant for overscaling and thickset horizontal proportions. Although ostensibly Romanesque, the wall treatment is so thick and severe and the detail so subdued, that style categorization is difficult and even inappropriate. At least four of the town churches, the Presbyterian Church in Greenwich, Connecticut (Fig. 20); the South Presbyterian Church, Morristown, New Jersey (Fig. 21); the Webb Memorial Church in Madison, New Jersey; and the Church of the Redeemer in Paterson, New Jersey, have a similar parti or composition. A large and bulbous semicircular apse is annexed to a bulky campanile or bell tower, and often in combination with these two forms are carriage porches and arcaded passageways. The low picturesque groupings of apse, tower, gable, cloisters, however, bely the modern usages of many of these traditional forms. For instance, the semicircular apse, which usually denotes an altar chancel, was actually the main public assembly room, and entry was frequently through the large towers. Thus, what at first sight appears to be the rear of the building is the main frontal view; individual parts remind us of the ecclesiastical nature of the building, but the arrangement of parts is functional and modern, suited to contemporary use and taste. A more traditional, Byzantine centralized church parti is shared by the Hampton Memorial Church at the Hampton Institute in Hampton, Virginia, (1886; Fig. 22), and the First Presbyterian Church In Wilkes-Barre, Pennsylvania, 1889.

Here, a square lantern lit by a clerestory sits astride the arms of a Greek cross, while smaller subsidiary volumes containing galleries, entry vestibules, and altar converge around the predominant volume in a harmonic grouping. In both cases tall bell towers endow the buildings with some vertical interest.

Cady's genius in the dexterous assemblage of spiritual space, though, is at its most adept in the urban churches, most of which were built in New York City and Brooklyn. The urban churches could be grand in size, as in St. Andrew's Methodist Church, West 76th Street (1889-90); the Broome Street Tabernacle (1884-85; Figs. 23-24); the Grace Methodist Episcopal Church, West 104th Street (1894-95; demolished); and the New York Avenue Methodist Episcopal Church, Brooklyn (1889-92); or they could occupy small urban lots, as in the Gustavus Adolphus Swedish Lutheran Church, East 22nd Street (1887), or the Olivet Memorial Church (originally German Presbyterian), East 2nd Street (Figs. 25-26).

All of the city churches were large auditoria, square in plan, and included several other functions within their complexes. The most distinguishable room was, of course, the auditiorium, but ground plans reveal the ingenious way in which Cady squeezed in smaller spaces to fit often awkward sites. For instance, at the Broome Street Tabernacle (Figs. 23-24); the Church of the Covenant at East 42nd Street (1871; the one of which Cady was a life-long member), and the aforementioned Grace Methodist Church, lecture rooms and classrooms were nestled in behind, alongside, and in front of the assembly room, the pulpit of which was not necessarily on axis wlth the main entrance. As with the town churches, Cady liked to place the entrance at the base of the tallest tower.

Another favorite, if offputting, Cady device was to place the main worship space on the second floor. In both the Olivet Memorial Church (Fig. 26) and Gustavus Adolphus Swedish Lutheran, gymnasia were placed in the basement; and,

in the Forsyth Street Synagogue, now the Seventh Day Adventist Church (1890; Fig. 27) rows of shops were set into the base of the Delancey Street side. As the critic Paul Goldberger pointed out, the mix of commercial and nonprofit real estate at the synagogue prefigured such latter-day mixes one finds at Louis Kahn's Yale Center for British Art in New Haven.[31] Once inside, the participant was confronted with a skyward openness due to the impressive use of iron for construction and ornament. The spatial sensation was more akin to that offered by nineteenth-century market halls or department stores than sacred spaces.

In sum, the churches, unlike any other building type by Cady, offer a glimpse into the design approach of the firm: find a functional system that works, and tailor individual examples to it. On the one hand, we see Cady working squarely within the established theoretical, stylistic, and technological practices of the day, but on the other he stretched those practices together perhaps further than his contemporaries dared. He secularized the ecclesiastical edifice as much as possible in order to suit it better to the exigencies of modern urban life.

## The Academic Buildings: 1880-1905

Except for the churches, the buildings designed for college and university campuses constitute the largest part of Cady, Berg & See's oeuvre. Cady's good social connections and his early success at Yale and Trinity in the 1870s targeted the firm as campus designers, particularly suited for "functional" buildings such as science laboratories, gymnasia, and infirmaries. In the period between 1880 and ca. 1905,

[31] Paul Goldberger, The City Observed, New York: A Guide to the Architecture of Manhattan. New York: Random House, p. 54.

Cady, Berg & See designed twelve more buildings for Yale,[32] as well as smaller jobs (1893 additions to Battell Chapel and Farnam Memorial Gateway); one more building at Trinity; two at Williams College, and three at Wesleyan, making a total of twenty-two academic buildings throughout the firm's career. Of the second phase of academic work, only five buildings survive at Yale, so they will be more fully discussed in this essay. They are: the Charles H. Farnam Residence, 1884 (28 Hillhouse Ave.; Fig. 28); Chittenden Hall, 1889-90 (Fig. 29); the Yale Infirmary, 1892 (276 Prospect Street); the Sheffield Chemical Laboratory, 1894-95 (51 Prospect Street; Fig. 6); and Hendrie Hall, 1894-97 (Fig. 30). The following buildings are no longer extant, and little information exists: Dwight Hall, 1885-86, which housed the YMCA; Winchester Hall, 1892-93 (Fig. 5), formerly part of the Sheffield Scientific School; Berkeley Hall, 1893-94; White Hall, 1893-94; Pierson Hall, 1896; Fayerweather Hall, 1900-1901; and Lampson Lyceum and Hall, 1903. Berkeley Hall, White Hall, Pierson Hall, and Fayerweather Hall all contained dormitories; Lampson Hall and Lyceum held offices, classrooms, and a hall for public lectures.

Perhaps the most successful of the second phase of the firm's academic work can be seen at Chittenden Hall (Fig. 29), although it, like the Peabody Museum, was only partially completed. Today it is adjoined by Charles C. Haight's collegiate Gothic Linsley Hall (1906-07) with its main elevation facing High Street. Chittenden or Memorial Library is probably Cady's most overtly Richardsonian building, showing clearly that he was looking hard at Richardson's campus buildings and small town libraries, most notably Austin Hall at Harvard (1881-84) and the Winn Memorial Library at Woburn, Massachusetts (1876-79). As originally conceived, Chittenden was

[32] For a record of Cady buildings at Yale, see Buildings and Grounds of Yale University. New Haven: Yale University Printing Service, 1979. There is, unfortunately, very little documentation on Cady at Yale other than some building specifications and a few letters between the architect and the former treasurer, Charles Farnam, housed at the Manuscripts Division at Sterling Memorial Library. Many drawings survive; these are housed at the Department of Buildings and Grounds.

a symmetrical, horizontally-proportioned edifice with a central projecting porch flanked by one prominent conical tower. Recessed wings led to projecting pavilions at each end which then were further extended by large octagonal rooms. Only one octagonal room with its adjacent pavilion was erected, and these serve as classroom space today. The greater detail of ornament and the only partial use of pseudisodomic stone laying with random ashlar were closer to Richardson's touch than Cady usually preferred, but the polychromy at Chittenden is much quieter in its tones than Richardson's usual dark/light contrasts.

Winchester Hall and Sheffield Chemical Laboratory were Cady's final creations for the Sheffield Scientific School, and, in the tradition of the earlier North Sheffield, they were utilitarian cubes with arcaded facades composed of magnificent brickwork, here a rich red. Sheffield Chemical Laboratory is probably the best remaining example of the superb craftsmanship of Cady's buildings, so many of which were executed in brick, but which, like the Met, are known only through old black and white photographs. A wide range of decorative effects, particularly in the corbelling and in the moldings around wall openings, was achieved. Cady's library contained many books on brick and terracotta contstruction, including Ludwig Degen's Les constructions en briques (Fig. 31; Paris, 1870; trans. from the German), Ludwig Runge's Beiträge zur Kenntnis der Backstein-Architektur Italiens (Berlin, 1846), and Ludwig Gruner's The Terracotta Architecture of North Italy (London, 1867). The ultimate pedigree was Italian brickwork of the Middle Ages, although most of his nineteenth-century publications concerning brick were German.

The three other surviving works by Cady at Yale are eclectic in style. The residence for Charles H. Farnam on Hillhouse Avenue (Fig. 28), which now houses the Economics Department, possesses the low proportions and chunky masses to which Cady was partial, but the "style" of the house is ostensibly Dutch Colonial. A

central shaped gable recalls artisan mannerist houses like Bacon's Castle in Surrey County, Virginia (c. 1655), but the prototype was probably intended to be generically Dutch. Cady could dip into the role of architectural historian, a talent evident in a paper he delivered to the New York Chapter of the A.I.A. on the old Dutch farmhouses of colonial New Jersey. Cady admired their broad, horizontal lines, the simple expressive roof masses suggesting "hospitality and good cheer," and their adaptation to their sites.[33] Cady is also known to have designed a "Dutch Room" for Harper's Publishing House.[34] Cady's library contained an impressive collection of books dealing with the colonial architecture of the United States, much greater even than Richard Morris Hunt's library.[35] Neo-Colonial echoes are also visible in the Yale Infirmary, where, according to Schuyler, the architect aimed to provide a refuge for sick students that would not repel by its institutional appearance. The infirmary resembles a generous old Georgian mansion, an impression also gains when looking at old photographs of the now lost Cady dorms at Yale. Schuyler wisely cautioned attributing a "style" or historical mode to them and, indeed, to most of Cady's buildings:

. . . these plain and solid buildings, besides being inoffensive and even satisfactory in themselves, cannot very well become incongruous with anything that may be executed in their neighborhood. One may find them a little dull, but they neither are nor can become ridiculous or offensive. They will be effective foils to whatever may ensue of richer and more monumental, just as the Jacobean and Georgian

[33] J. Cleaveland Cady, "Some Features of the Dutch Farmhouses of New Jersey," American Architect and Building News 2 (1877): 401-2. Vincent J. Scully, Jr., discusses Cady's paper in the context of the Colonial Revival in his The Shingle Style and the Stick Style. New Haven and London: Yale University Press ,1955, pp. 48-49. In 1880 Cady designed the Hopkins-Miller Houses on the south side of Dupont Circle in Washington, D. C.; the houses, razed in 1948 and 1912, were also brick Dutch Colonial in inspiration. They are illustrated in James M. Goode, Capital Losses: A Cultural History of Washington's Destroyed Buildings. Washington, D.C.: Smithsonian Institution Press, 1979, p. 88.

[34] The Hartford Daily Times, January 22, 1878.

[35] Dan Helmick, a student in the Cady seminar, did a comparative analysis of Cady's library and Hunt's library, the latter which now forms part of the rare book collection of the A.I.A . in Washington, D. C. He found that Cady owned many more books on colonial architecture of the United States.

dwellings in the English cathedral-closes are effective foils to the minster.[36]

In Schuyler's view, the good neighborliness of Cady's buildings redeemed their lack of flair, a fair estimate that may also, unfortunately, have contributed to criticism of his work as prosaic, to his subsequent fall from fame, and to the buildings' demolition in favor of something showier.

The buildings that Cady designed for Trinity, Williams, and Wesleyan fall into many of the patterns established by the Yale commissions. Trinity's Jarvis Hall of Science, 1888 (Fig. 32), formerly located southeast of the Burges building, followed in the tradition of the three buildings executed for the Sheffield School. Jarvis shared a special similarity with Winchester Hall in that the cubical brick volume was punctuated on each corner with a conical turret. Jarvis provided accommodations for several laboratories, two lecture rooms and several workshops for optics, electricity, and batteries. The style was of a primitive Romanesque, verging on the a-historicist, that perhaps best describes Cady's identifiable mode of building.

If Cady's stylistic vocabulary was far from glamorous, so, too, were the building types with which he is most nearly associated. For Wesleyan, he executed the boiler plant in 1891, but on the strength of that humble buiding he received one enviable commissions the campus had to offer: Fayerweather Gymnasium (1889; Fig. 33). According to Wesleyan historian David Potts, Cady's gym introduced the Romanesque style to Wesleyan's campus and started a trend to hire prominent architects to design buildings on campus. Students, faculty, and alumni were proud to have the "well-known architect from New York" inaugurate the expansion of campus facilities.[37] At Fayerweather the influence of Richardson's small town libraries is evident in the long clerestoried wing emanating left of an entrance which

[36] Schuyler, p. 524.

[37] David B. Potts, Wesleyan University, 1831-1910: Collegiate Enterprise in New England. New Haven and London: Yale University Press, 1992, pp. 189-90.

is flanked by two conical towers. Rusticated stone on the basement contrasts with tight brickwork above, and curious piston-like buttresses. A clerestory projecting from the roof provided extra needed light.

Fayerweather Gym typified the fad for gymnasium construction in the late nineteenth century. The gradual rise of public athletic competition in the nineteenth century, although related to the growth of metropolitan areas like New York, was especially reflected in the country's idyllic college settings. As institutions grew, so too did the competition for attractive and wealthy candidates who would best serve the respective colleges in later years. Sport was one effective means of attracting students, spreading one's renown and, so college leaders believed, of preparing young men for success in the business world and the rigors of urban life. As Wesleyan's president, Bradford Raymond, proclaimed in the 1890s:

> . . . athletics in our colleges are doing a great deal for the development of physical men who must be able to stand the stress of hard business life, and of professional life, and to carry on with success the enterprises which they take hold of. . . . the man who goes on the football field is the man who learns to develop the right kind of courage to meet the difficulties of great cities.[38]

The appeal for an architecture and lifestyle that would embrace metropolitan life foreshadowed Le Corbusier's inclusion of gymnastics as central to the domestic habitat and urban existence.

The nineteenth-century gymnasium and the idea of physical education, as transplanted to America, had its roots in Germany. The movement began there under the leadership of the intensely nationalist Friedrich Ludwig Jahn (1778-1852), who, sorely affected by Napoleon's defeat of Prussia, organized a military school in Berlin in 1809 whose curriculum attempted to unify exercise and sport with courses

[38] Ibid., p. 187.

in German history and traditions.[39] Jahn's ideas were carried to America by his student, Charles Follen (1796-1840), the author of a seminal book on German turnvereins or gymnastic societies, and, not unconnectedly, the namesake of the American architect, Charles Follen McKim of McKim, Mead & White.[40] Charles T. C. Follen (anglicized from Karl) was forced to leave Prussia in 1824, and came to America where he was welcomed as Harvard's first Professor of German. While at Harvard, he was instrumental in establishing the first gymnasium in the United States there, which opened in 1826.[41] With the great waves of German immigration after 1848, turnvereins flourished in this country, where they continued their dual role as sports organizations and as a means of preserving national identity and cultural forms.

It is interesting to speculate whether Cady's and Berg's German architectural experience predisposed them toward gymnasium design. Certainly the wide spans needed in gym construction required the engineering expertise of a civil engineer like Louis Berg. Recall that gymnasia were installed in the basements of both Olivet Memorial Church (originally German Presbyterian) and Gustavus Adolphus Swedish Lutheran. Finally, in his article on the firm, Schuyler illustrated a large gymnasium by the firm in New Rochelle, New York. As with present-day architectural firms who specialize in sports stadia, Cady, Berg & See must have been similarly viewed.

Wesleyan's Fayerweather was part of an even more potent second wave of modern gymasium building that occurred in the second half of the nineteenth century, when Princeton erected its first gym (1856); Hemenway was built at Harvard (1878); Pratt at Amherst (1884); Lyman at Brown (1891); Yale's University

[39] Harvey Green, Fit for America: Health, Fitness, Sport and American Society. New York: Pantheon Books, p. 89-90.

[40] Leland Roth, McKim, Mead & White, Architects. New York: Harper & Row Publishers, 1983, p. 13.

[41] Green, p. 90.

Gymnasium (1892), and Lasell at Williams (1886; Fig. 34), the last also designed by Cady, Berg & See. Lasell and Morgan Hall (1883; Fig. 35), a dormitory, were Cady's sole contributions to the architecture of Williams College. As a duo they are more easily wedded than the two Trinity buildings because of their similar building materials (Kentucky and Williamstown limestone) and their style, here an eclectic mix of Dutch and Romanesque features. With its decorative shaped gable and stocky Romanesque tower, Lasell Gymanasium shares much with the Farnam Residence in New Haven, then under construction (1884; Fig. 28). The curiously neo-Mannerist Wilbur Fisk Hall (begun 1904) and the 1898 additions to the Memorial Chapel, both at Wesleyan, conclude the list of Cady, Berg & See's academic buildings.

Social Welfare Building: The Public Baths and Hospitals

As with the Metropolitan Opera, the gymnasia, and the scientific schools, Cady, Berg & See made significant contributions to the development of two relatively unstudied nineteenth-century building types that also required a combination of design and high technical expertise: public baths and hospitals. Not surprisingly, an analysis of the public baths and hospitals reveals the patterns clear in the firm's other commissions: the public baths and hospitals were a success as a result of Berg's civil engineering training (in this case, his knowledge of ventilation and sanitary engineering) and, in the case of the public baths, the "building type" exhibited the firm's penchant towards buildings and features of German origin.

In August 1891, the People's Baths, one of the most successful and well-publicized public baths in nineteenth-century America, opened at 9 Centre Market Place on New York's Lower East Side (Fig. 36). The architects were Cady, Berg & See. The People's Baths, funded by the New York Association for Improving the

Condition of the Poor (AICP), gave instant recognition to the firm, so much so that, when William H. Strong was elected mayor of New York in 1894, the Subcommittee on Baths and Lavatories, formed under his leadership, made Cady, Berg & See the official providers of future designs for municipal baths in the city. [42]

The public bath movement began in England in the 1820s, reached its peak there in the 1840s, and spread to the Continent and North America by the mid-nineteenth century. From the beginning, though, public bath reform here differed in one essential respect: unlike European baths that were patronized by the middle classes who lacked bath facilities in their homes, American public baths were built for the poor. And, unlike the European bath system which was instantly successful, American public baths of the mid-century period languished because of lack of clientele. For instance, the AICP, the organization that funded the People's Baths, opened the first public bath in New York City in 1852, but had to close it in 1861. The movement did not gain momentum here until the 1890s, when it was promoted most forcefully by a physician, Dr. Simon Baruch, unanimously considered the father of the public bath movement in America.[43]

Simon Baruch, a German Jew who immigrated to this country in his teens, received his M.D. in South Carolina in 1862 and quickly rose to fame as the first physician to perform an appendicitis operation in America. A great believer in "hydropathy," Baruch moved to New York in 1881, where he began his campaign for public bath reform. In the late 1880s, he traveled to Europe, where he was favorably impressed with the municipal bath system, particularly the one in Germany.[44]

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[42] For an excellent history of the public bath movement see Marilyn Thornton Williams, Washing the Great Unwashed: Public Baths in Urban America, 1840-1920. Columbus, Ohio University Press, 1991. The best primary source for the history of public baths in New York is the Report on Public Baths and Public Comfort Stations by the Mayor's Committee of New York City, Albany and New York: Wynkoop Hallenbeck Crawford Co., 1897. The mayor's report includes all of the designs for municipal baths by Cady, Berg & See.

[43] Williams, pp. 10-16.

[44] Ibid., pp. 42-43.

One feature of the German public baths especially appealed to Baruch: their widespread acceptance of the rain bath or shower. Credited with being either a French or German invention, showers were first used in military barracks in the mid-nineteenth century. In 1883 Dr. Oscar Lasser of the University of Berlin set up his model of a Volksbad or "People's Bath" at the Berlin Hygiene Exhibition in order to prove the feasibility of using spray showers in public bath facilities.[45] The convenience, efficiency, and sanitary nature of the shower soon made it the ideal type of bath.

At the urging of Baruch, the AICP erected the People's Baths in August 1891, and, unlike their earlier effort, the baths were so successful that they were frequently studied and much imitated. The Mayor's Report of 1897 described Cady, Berg & See's brick, round-arched building as being substantiallly constructed of brick and iron, with iron floor supports, and a roof and bathrooms of iron. Nine spray showers were allotted to each of the sexes on the main floor, and there were an additional nine showers in the basement. The report elaborated: "Every inch of space is economized. The whole structure is a model in its way and a compact embodiment of architectural and mechanical skill. Solidity is its great characteristic and a glance at the building will convince any one that it is certainly well adapted for perennial baths. . . . The floors and walls are as clean and bright as the kitchen of an American housewife, and the brass work shines like her tins."[46] For five cents, each bather was given a towel, a cake of soap, and twenty minutes of shower time, carefully monitored with an sand glass. The rundbogen style of the building recalled that frequently used in German baths, with one English intrusion: John Wesley's maxim "Cleanliness is Next to Godliness" was inscribed above the door.

[45] Brian K. Ladd, "Public Baths and Civic Improvement in Nineteenth-Century German Cities," Journal of Urban History 14 (May 1988): 372-93.

[46] Mayor's Committee on Public Baths, p. 48

It is unknown through what venue Cady, Berg & See got the People's Bath commission. Did they know Baruch? Was it an open competition, or were they simply invited on the record of their reputation? Were they targeted as a firm with architectural ties to Germany, where the shower baths were first applied? One of the most sumptuous and technically advanced of the German public baths was located in Stuttgart where Berg received his training. That bath boasted two swimming pools, 300 dressing rooms, 102 tub baths, and a bath for dogs![47] Germany certainly provided the model for the People's Baths; even the name "People's Bath" is an adaptation from the German Volksbad.

As a consequence of their well-received design, in 1895 Cady, Berg & See were invited to submit another plan for a much grander bath to be situated on a city lot measuring 100 feet by 50 feet (Fig. 37). This bath was to be located in Tompkins Square Park, and it was to be the first of a series of five. The completed design, including front elevation, ground plans, and section were included and described in the 1897 Mayor's Report. [48]

The elegant U-shaped building was much larger than the People's Baths. The Italian Renaissance style recalled McKim, Mead & White's recent Beaux-Arts Boston Public Library (1888-95) or, closer to home, the Henry Villard Houses, New York (1883). Marble was preferred as a cladding, but limestone or some other masonry, light in color, was recommended. Eighty baths were allotted for, most of which were "rain showers" or "ring showers" (so that water would not strike the head); the German or Gegenström system of heating water was recommended.[49] The most important consideration in planning was the thorough separation of the sexes.

Cady, Berg & See designed many other baths and comfort stations (public

[47] Williams, p. 32.
[48] Mayor's Committee, pp. 199-299.,
[49] Ibid., pp. 200-204.

toilets) for the Subcommittee on Baths and Lavatories, and these are included in the mayor's report. None was as ambitious as the Tomkins Square Park scheme, and none, including the latter, was executed. Residents protested the presence of a public bath in their park, believing it would rob them of its enjoyment. Baruch, too, resisted the notion. In addition, Mayor Strong was defeated in the 1897 election and the new mayor, Robert Van Wyck, was less interested in their construction. Not until 1901 would New York erect a bath paid for by the city; the Rivington Street bath opened on March 23 of that year at a cost of $95,691; it contained ninety-one showers and ten bathtubs.[50]

Cady, Berg & See could also boast of three hospital designs. Indeed, it is likely that their acclaimed design for the Presbyterian Hospital, New York (1886; Fig. 38), two years following the completion of the Metropolitan Opera, contributed early on to their growing reputation as engineer-designers. In addition to the Presbyterian Hospital, Cady, Berg & See also designed the Hudson Street Hospital, New York, the building of which still stands, in 1894 (Fig. 39). Montgomery Schuyler illustrated, but did not discuss, a sketch of a third hospital, the New York Skin and Cancer Hospital (Fig. 40), possibly because it was not yet erected at the time of his article on the firm in 1897. Information on all of the hospitals is scanty, but one thing is certain.[51] None of Cady's hospitals was on the scale of the large hospitals of the nineteenth century, such as Johns Hopkins in Baltimore, the most ambitious of the so-called pavilion hospitals erected before the advent of the "germ theory" of disease, when it was believed that physical separation of similarly-afflicted patients

[50] Williams, pp. 51-52. I am uncertain if the Rivington St. baths were executed to Cady's designs, although it is unlikely given the different number of baths than that projected for the Tomkins Square Park scheme. In his Architectural Record article (1897), Schuyler illustrates the perspective drawing of the Tomkins Square Park bath.

[51] Schuyler, p. 533. Cady's obituary in The New York Times (April, 18, 1919) mentions that Cady was President of the Skin and Cancer Hospital and a Governor of the Presbyterian Hospital when he died. Schuyler's article remains the best source of information on the hospitals.

into longitudinal wings would deter the spread of diseases thought to be carried by miasmas. The pavilion hospitals could be costly architectural extravaganzas of enormous size. All three of Cady's hospitals were modest additions to already existing compexes.

The Presbyterian Hospital is best documented. The hospital complex, formerly located at East Seventieth between Madison and Fourth (later Park) Avenues, was erected in the early 1870s to the designs of Richard Morris Hunt, and included an administration building, a substantial ward building, and a heating plant. Hunt had designed the hospital for James Lenox, for whom he designed the nearby Lenox Library (1870-77), also demolished. Following a fire which left only the administration building unharmed, Cady was called in to design additions which included an operating room and a dispensary.

Schuyler was right in describing the organizing principle as distinguished (Fig. 38). The operating room, a separate brick building, square in plan and two stories in height, was adjacent to the dispensary, the masterpiece of the complex. Viewing the dispensary from the rear elevation, one would be reminded of a church. Cady adjusted forms closely associated with an Early Christian basilica--high central aisle or nave, lower side aisles, semicircular apse with an adjacent tower--into the requirements of a medical dispensary. The "nave" was a waiting room; the side "aisles" with "chapels" were doctors' offices; and the stark tower with ornamental brick and terracotta at its upper stages supplied ventilation for the group of buildings around it, a clever device Richardson was simultaneously using at the Allegheny County Courthouse and Prison in Pittsburgh. Cady's Romanesque building, though, was in his favorite dark red brick with red terracotta trim.[52]

Very little information is available concerning Cady's other two hospitals;

[52] Schuyler, p. 534.

virtually none exists for the Skin and Cancer Hospital.[53] The Hudson Street Hospital or House of Relief (Fig. 39), situated at the corner of Hudson and Jay Streets, now contains apartments, and, when constructed, was part of the New York Hospital. It was designed for the reception of accident and emergency cases arising in lower New York. The functional red brick cube, now painted yellow, housed an ingenious ventilation system, installed such that the air in the operating rooms was replaced every five minutes, and all other rooms had their air completed replaced in no more than twenty minutes. Cady was quoted as boasting that:

> No drafts are felt in any part, not even where the air is changed every five minutes, although the currents are so strong that at some of the large registers -- for instance, the one in the main operating room -- a heavy winter coat can be taken off and laid vertically against the register. It will remain there the same as if hung on a coat hook, the suction of the exhaust air being so strong; and yet you can hold your hand within two or three inches of the register and not feel any current.[54]

Not only was the ventilation the best of its kind, there was an advanced heating system that kept all of the rooms at an even temperature between seventy and eighty degrees.

Two more related buildings that fall in the social welfare category that should be mentioned have also disppeared, knowledge of them coming only from Schuyler's invaluable assessment of Cady, Berg & See's career: a Protestant Half Orphan Asylum (1893) on Manhattan Avenue, and a Home for Old Men and Aged Couples (1897), at Morningside Heights. Schuyler, unfortunately, discussed neither.

In conclusion, one may make some generalizations about Cady, Berg & See's contributions to the important but too often overlooked category of buildings

[53] Schuyler illustrates the Skin and Cancer Hospital in sketch form, so it may not have been erected at the time of his article on the firm in 1897. In Cady's obiturary in the New York Times, it is mentioned that he was president of the Skin and Cancer Hospital.

[54] The Engineering Record, V. 32, no. 18, September 28, 1895: 318-20.

intended for the sick and destitute. In the construction of public baths, hospitals, and miscellaneous edifices, the firm made path-breaking strides. The combination of factors leading to their seeming hegemony in the social welfare field can be surmised. Cady was an established architect with social connections, a President of the Skin and Cancer Hospital, and a Governor of the Presbyterian Hospital. Berg was a superbly trained engineer, who acted as architectural and sanitary adviser to Mayor Strong's committee that oversaw the construction of the first public baths in New York. The astringent functions of the buildings demanded the serious, no-nonsense design that the firm mastered, expoited, and, in some ways, served most nobly.

Miscellanea: Commercial and Domestic Architecture

From the little that survives of Cady, Berg & See's activities over their ca. thirty-six year partnership, one can ascertain that the firm was an active one and, one suspects, much material remains to be discovered and evaluated. The two building types which remain most elusive given their often transient nature are the tall buildings and single-family houses. In both cases, we are left with old black and white photographs or published lithographs. Some, especially the houses, probably have survived the years, but the memory of their architects is lost. Yet some attempt should be made to place the firm's work into the domestic-architectural context of the late nineteenth century, and into the context of their own work. Schuyler published only two tall buildings by Cady: the Gallatin Bank, New York (Fig. 41; 1885; demolished) and the Phoenix Mutual Life Insurance Company, Hartford (1897; demolished). Furthermore, he only discussed the Gallatin Bank and neither discussed nor illustrated the firm's domestic commissions.

The tall building or commercial skyscraper of the nineteenth century is a rich subject which has received a good amount of attention from architectural historians.[55] Emphasis has focused either on definitional questions: "what makes a skyscraper, technologically?" or geographical questions: "where were the first skysrapers built?" By now there is general consensus that the first skyscraper in a technological sense was William Le Baron Jenney's Home Insurance Building, Chicago (1883-85; demolished) and, although New York was the home of some of the early important tall buildings, the evolution really took off in Chicago. Within the present evidence, one can deduce that Cady, Berg & See's tall buildings offered nothing, technologically or geographically, to change this assessment. The Gallatin Bank (Fig. 41) had load-bearing masonry walls, not unusual for 1885, but the later ten-storied Lancashire Fire Insurance Building at 25 Pine Street, New York (1891;demolished), did possess steel cage construction. Indeed, Berg claimed that it was the first tall building in New York with metal cage construction, and that it had "already been adopted as the standard of construction for nearly all the new tall buildings. . . ." [56] Stylistically, Cady, Berg & See vacillated: the Gallatin Bank showed an eclectic mix of a round-arched and trabeated commercial style with some Byzantine features, not unlike Burnham & Root's Rookery Building in Chicago of roughly the same period (1885-86). Or their work could show the burgeoning influence of Beaux-Arts academicism; witness, the Phoenix Mutual in Hartford.

There is one intriguing connection, though, which Schuyler did not mention and which only surfaced with an inspection of the Cady/Gordon L. Ford

[55] It is impossible to give a full list of skyscraper studies, but some classic articles include: Winston Weisman, "A New View of Skyscraper History," in The Rise of an American Architecture Edgar Kaufmann, Jr. , edit., New York: Praeger Publishers, pp. 115-60; William H. Jordy's discussion of skyscraper evolution in volume 3, Progressive and Academic Ideals at the Turn of the Twentieth Century, of the American Buildings and their Architects series, and Chicago and New York, Architectural Interractions, Chicago: Art institute of Chicago, 1984; and Carl Condit, The Chicago School of Architecture. Chicago: University of Chicago Press, 1964.

[56] Berg, "Iron Construction in New York City," p. 450-51.

correspondence at the New York Public Library.[57] Gordon L. Ford was the business manager of the New York Tribune, who was on friendly terms with Cady. Cady wrote often to Ford, asking the favor of publishing and writing up his buildings in the prestitigious newspaper, and usually Ford complied. This correspondence provides bits of information on both unknown and known works of the firm, but because of Ford's position, reveals much information on the Tribune Tower competition, including the fact that Cady was the chief rival of Richard Morris Hunt, the eventual architect of the building.

Hunt's Tribune Tower on Printing House Square in New York (Fig. 42; demolished) holds a special place in skyscraper history because it was twice as high as any commercial structure yet built in the city, rising 260 feet from the sidewalk to the finial of the tower, when completed in 1875. It possessed an elevator, it was fire-proofed, but its walls were load-bearing, and thus it lacked the steel cage construction necessary to a "true" skyscraper.[58] The style, which one scholar describes as a kind of commercial Neo-Grèc, was French-inspired. In this country its salient characteristics were the structurally expressive nature of the masonry facade and minimal ornament, usually incised on light-colored stone.[59] The widely-known Tribune Tower helped initiate the application of the Neo-Grèc to commercial architecture in the 1870s and 1880s.

Whatever the virtues of Hunt's building, its restless detail countered the grand sweep of integration that a high building needed. The tower, placed in the middle of the Printing House Square facade, was too meagre to have forceful effect. Without necessarily arguing that Cady's was a better design (Fig. 43), it undeniably

[57] See footnotes 7 and 24.

[58] For a recent history of the Tribune Tower, see Sarah Bradford Landau, "Richard Morris Hunt: Architectural Innovator and Father of a "Distinctive" American School," in The Architecture of Richard Morris Hunt, Susan R. Stein, edit., especially pp. 54-60.

[59] Landau, p. 58.

possessed a visceral vigor and unity; it was a stronger statement. The ostensible style was round-arched Romanesque, and the unifying device of segmental arches on the ground floor with repeating round arches subsuming several upper floors was not uncommon. Richardson used something similar at the Cheney Building in Hartford (1875), and even more masterfully at the Marshall Field Wholesale Store in Chicago (1886). The polychromed voussoirs of the arches dated Cady's building to the 1870s (it was most like North Sheffield School), but its strength of parts to the whole carried the design. The southwest corner tower, the building's most vigorous element was, apparently, the element most obstructive to Cady's getting the commission. He offered to move it to the northwest corner, where it would distinguish the Tribune's property from the neighboring property, but he steadfastly maintained that his original design was his "favorite plan."[60] Many factors of the competition angered Cady, wrongly or rightly. He claimed that Hunt had a strong influence and that he was allowed access to all of the competitiors' designs before the competitors were allowed to compare the entries. Whitelaw Reid, the paper's editor, later denied Cady's charges, and Ford seemed a passive listener. But the final vote was between Hunt's and Cady's entries, and the vast majority approved Hunt's scheme. So goes the political and aesthetic biases inherent (but usually buried) in art and architectural history.

Though Cady never stated it, he must have felt a particular rivalry with Hunt. After the Tribune Tower disappointment, Cady was to design buildings on territory where Hunt had already trod: Yale College, the Hampton Institute, Presbyterian Hospital. Hunt's ascendancy to the professional "deanship" of American architecture after the 1893 Chicago World's Fair must have bothered Cady, especially given that Hunt was ten years older and he was the leader of an important

[60] There are several letters and miscellaneous documents in both the Cady and Ford Papers at the New York Public Library from May through August, 1873, that concern the competition.

shift in American architecture. Cady continued directions that had their germ in the 1840s.

Because Cady's two most noteworthy houses, the Yale-affiliated Othniel Marsh and Charles Farnam Houses were previously discussed, a few sentences on his domestic design will suffice. In the Cady Collection at the Watkinson Library, there exists a collection of prints, probably assembled by Cady, titled Architectural Sketchbook which shows prominent buildings and building projects of the 1870s; for instance, Cady's and Hunt's Tribune Tower entries are confrontationally opposed. Within the collection are designs for three large suburban houses labeled "Burnham House," "Design for a Country House," and "House Designed for a Suburb of Philadelphia (Fig. 44)." Stylistically they fall comfortably into the period: they are picturesquely planned stone or Stick Style buildings, with irregular rooflines and generous verandahs. A kind of Saint Anthony Hall-like stocky Gotho-Romanesque is evident, particularly in the Philadelphia house. No ground plans survive. The series show Cady to be a gifted architect abreast of current trends in domestic design; his peculiar penchant for expressive volume and underornamention perhaps exonerate him in the eyes of those who would criticize late Victorian design. Most significantly, they add garnish to the smorgasbord of the firm's reach and range.

## The Watkinson Library

Josiah Cleaveland Cady died on April 17, 1919, at the age of 82. The partnership with Berg and See ended in 1909; Cady had then formed a partnership with William S. Gregory, a draughtsman in his office, which lasted until his death. Activity in the firm must have slowed, because no known Cady buildings exist from

these years. Cady bequeathed his impressive architectural and photo library to Trinity College, and it is now housed in the Watkinson Library.

The Watkinson Library was originally conceived as part of the Wadsworth Atheneum, founded in 1842 by David Wadsworth. It was to be one wing of a tripartite scheme envisioned by Wadsworth, where the middle section would contain a gallery of fine art, the south wing would house the Connecticut Historical Society, and the north wing the Watkinson Library. David Watkinson, a co-founder of the Wadsworth Atheneum, began a fund raising event which culminated in 1864 with the erection of the orignial Watkinson Library. By late 1891 it was necessary to completely renovate the library due to inadequate storage facilities. Junius Spencer Morgan and J. Pierpont Morgan began a capital campaign pledging $100,000 and $50,000, and the Goodwin's and Keney's generously added contributions to raise over $400,000 for the new building. Cady was asked to design the new wing which not to the north but to the rear (east) of the art museum.[61]

Cady's Watkinson Library opened on Janurary 2, 1893. Its Gothic style conformed to that of Town & Davis's 1842 Wadsworth Atheneum building. The interior arrangement, an elegant and lofty double-height room with stacked alcoves containing books, was the usual one for public libraries in this country. All the early public libraries: the Astor Library in New York, the first Boston Public Library, the Peabody Institute in Baltimore, and even the first Library of Congress adhered to this organization system. The great walls of books with galleries running around the top tier of alcoves made for an awe-inspiring but cozy room in which to read, but this type of arrangement was disastrous for expansion. By the late 1940s the Watkinson was in serious disrepair, and, after years of complicated negotiations, it was moved in 1952 to the new library building at Trinity College where it remains to this day.

[61] The Watkinson addition was not Cady's first experience in library design. He had designed the Barron Library in Woodbridge, New Jersey, in 1877, and the "Village Library" in Huntington, Long Island.

The Watkinson, far from the least of Trinity's jewels, acts as the rare books library at Trinity; thus, the Cady library was acquisitioned by them.

As an architectural library it is a marvel, numbering about four hundred volumes on English, French, German, and American architecture. There are a few eighteenth-century volumes, but most date about 1840 to ca. 1910. Cady also donated several hundred stereo cards and large black and white photographs of historical monuments. The photographs primarily show views of French and Italian architecture, often Romanesque, but there are also Spanish, English, and East Indian buildings. One would expect photographs of well-known monuments, but Cady seemed to prefer background buildings and scenes of alleys, gates, staircases, and bakeries. Just as with his own buildings, he was more interested in urban fabric and context than muscle-flexing individuality.

## An Assessment of Cady's Career

In discussing the various draftsmen who worked for the firm of Town & Davis in his famous book Greek Revival Architecture in America, Talbot Hamlin mentions J. C. Cady, of "the once well-known firm of Cady, Berg & See."[62] Exactly when Cady fell out of public favor is unknown, but, given the breadth of the firm's work one must ask, why?

There are a number of possible explanations, some more obvious than others. Cady belonged to a generation of American architects whose careers either began or grew into maturity shortly after the Civil War: Richard Morris Hunt, Henry Hobson Richardson, Leopold Eidlitz, Frank Furness, even a young Louis Sullivan, are some of the better known. The period roughly between 1865 and 1895, Lewis Mumford's

[62] Hamlin, p. 144.

"Brown Decades," was absorbed with such issues as how to modernize various medievalisms to a growing variety of secular building, at the same time demonstrating structural honesty and vitality, and embellishing those forms with a brash and fresh approach to color and ornament.

As early as the 1950s, thanks to historians like Henry-Russell Hitchcock, Vincent Scully, Nikolaus Pevsner, and Sir John Summerson, there has been a unanimous re-appreciation, even admiration, of the High Victorian years. Yet, more than the period of the Greek Revival in the 1830s, or the antebellum period from ca. 1840 to 1865, we still think of the latter half of the nineteenth century in terms of a litany of saints. In England there was Butterfield, Street, maybe G. G. Scott; in this country the eccentric Furness, but most of all the magnanimous form of Richardson and his work, which spread over the period the golden warmth of a Childe Hassam sunset. Richardson's buildings evoke, demand, a visceral response; one remembers vividly first seeing them in undergraduate art history class. But if Richardson's buildings prompt love, Cady's require some thought, some knowledge, and then induce a great deal of quiet respect for the life work of this man and his talented partners. Richardson wanted to design "quiet" buildings, but the adjective is better applied, really, to Cady.

Without elevating Cady, Berg & See to heroic status, for that would be undeserved, certainly there is a place in modern architectural history for this firm which managed such a range of well-known and well-constructed buildings. What other firms of the late nineteenth century produced opera houses, museums, hospitals, campus buildings, public baths, and the usual churches, houses, commercial building, and so on? Adler and Sullivan had perhaps similar range, as did McKim, Mead & White, but the latter were proto-corporate, and the former partnership lasted under two decades.

There are other reasons for their eclipsed fame, hinted at earlier, and they are linked. Cady, Berg & See's work cannot be understood without some knowlege of contemporary events in Central Europe, especially Germany. The German contribution to American architecture has been the last to be recognized in this century, strange given that most immigrants to America in the nineteenth century were German, and many of the best-trained architects before American Beaux-Arts classicism were from Central Europe. There were many more polytechnical schools in Germany than in France and England, or in America. The Germans were good engineers, and they took brick architecture to unimagined heights. Their sense of Spartan beauty combined with exacting craftsmanship of materials created what Henry-Russell Hitchcock called a "mathematical beauty," a seeming oxymoron.

Cady once wrote to Gordon Ford ". . . you know my forte has been in part to avoid faddish extravagance -- whether work was simple or rich."[63] Cady understood his strengths and weaknesses, and so did his clients, because letters and reviews concerning the firm's work are usually very favorable. Even the Metropolitan Opera, their most luxurious building, did, in fact, look a little like a "yellow brick brewery," but New Yorkers loved it. Undoubtedly, Cady's most successful buildings were those that demanded a sober statement: the scientific schools at Yale, the gymnasia, hospitals, baths. The American Museum of Natural History is more beautifully conceived than beautiful. Yet Cady, Berg & See's vast body of work does not hang together seamlessly in one grand sweep, as do Richardson's, Furness's, or even Hunt's, and for a very good reason. They were, to use a current phrase, contextualists, always measuring their buildings with what was, or what might be around them. They responded with clever plans, different styles, a variety of materials, and neighborly buildings.

[63] Cady to G. Ford, August 1, 1881, Ford Papers, NYPL.

Finally and paradoxically, one can argue that Cady, Berg & See's reputation did not endure because their body of work has failed to live up to the standards of greatness, defined by historians, needed to enter into the hall of fame of nineteenth and twentieth-century architects. In the nineteenth century, these qualities might include the opulent beauty of Garnier, or perhaps the eccentricity of Furness, the form-giving talent of a Richardson, or the engineering athletics of an Eiffel. In the mechanistically-minded twentieth century, those contributing to the notion of progress have reigned, although we have learned to admire the Traditionalists as well. Cady, Berg & See were and are not heroes in either system, but perhaps with some historical adjustment this may change. Afterall, there should be a place in history for firms like them. In our post-modern age, when we have rediscovered the value of background building, the craft potential of traditional materials, and the well-built humble, surely they deserve some recognition.

Fig. 1.

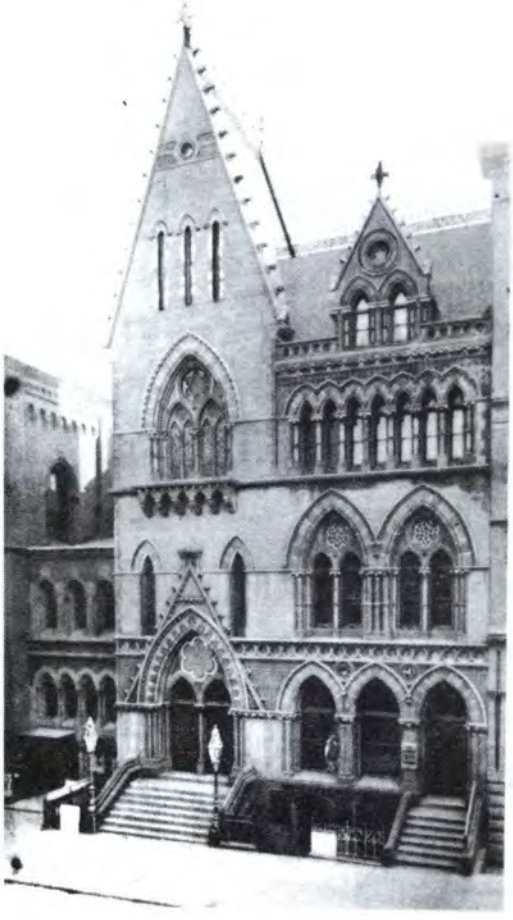

Fig. 3.

Fig. 2.

Fig. 4.

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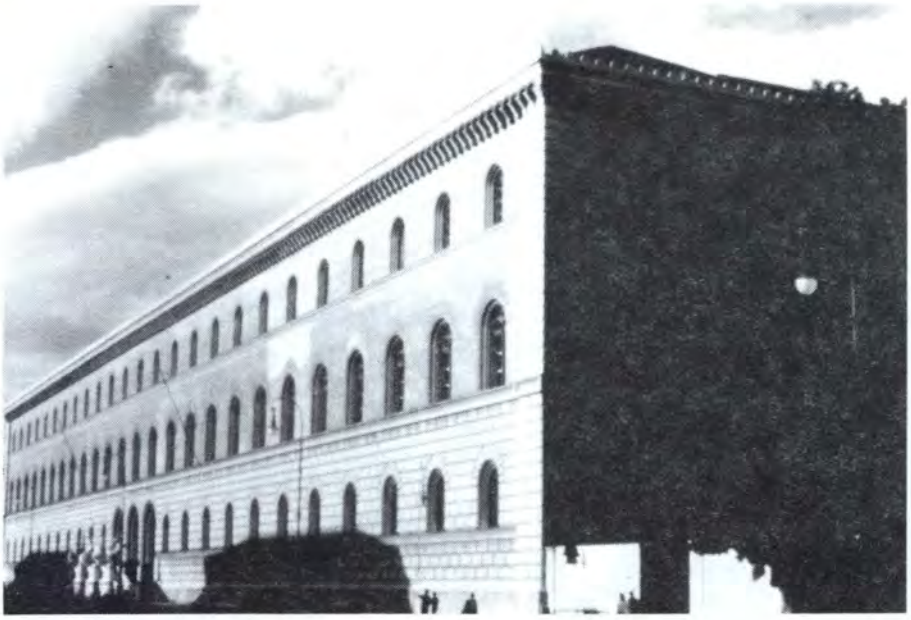

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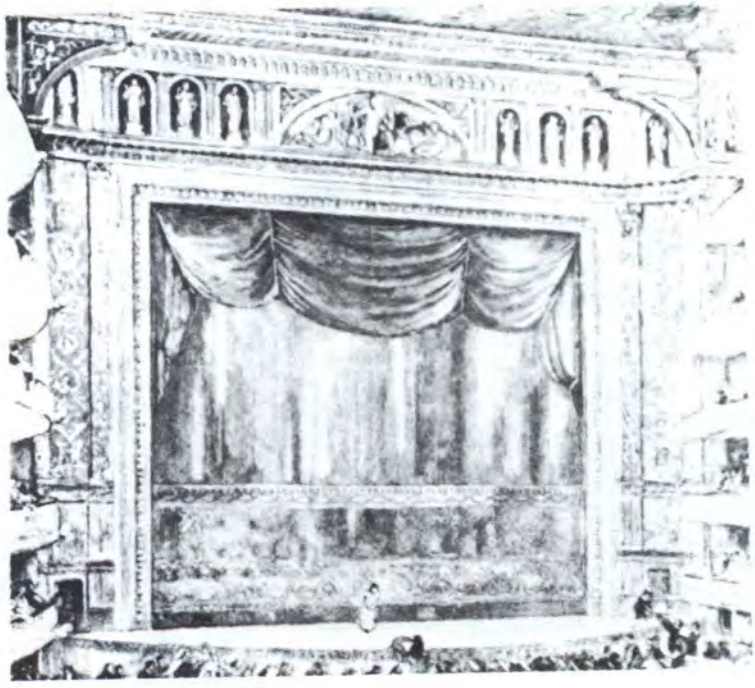

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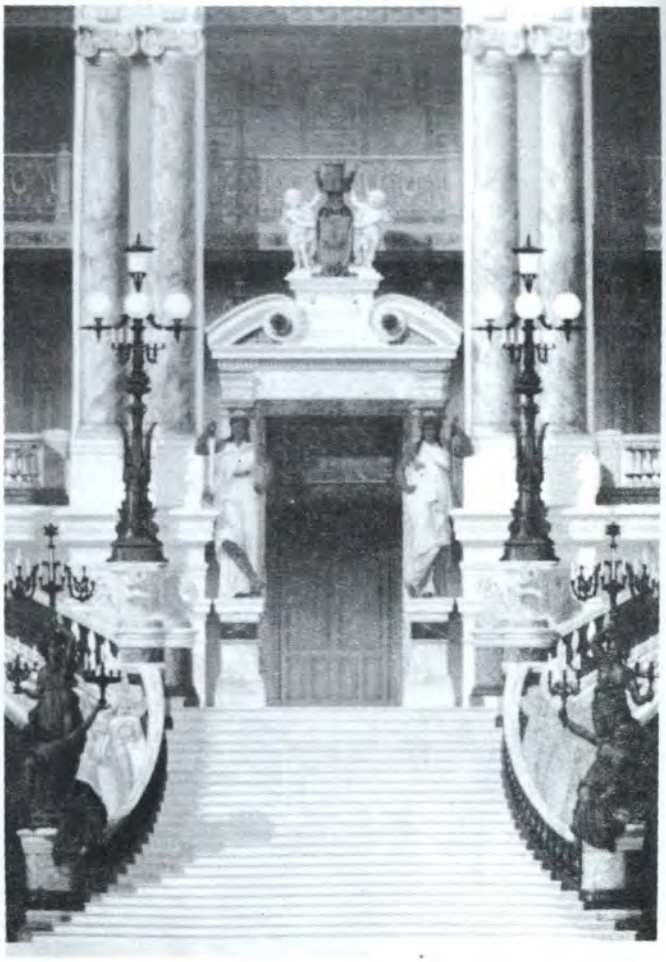

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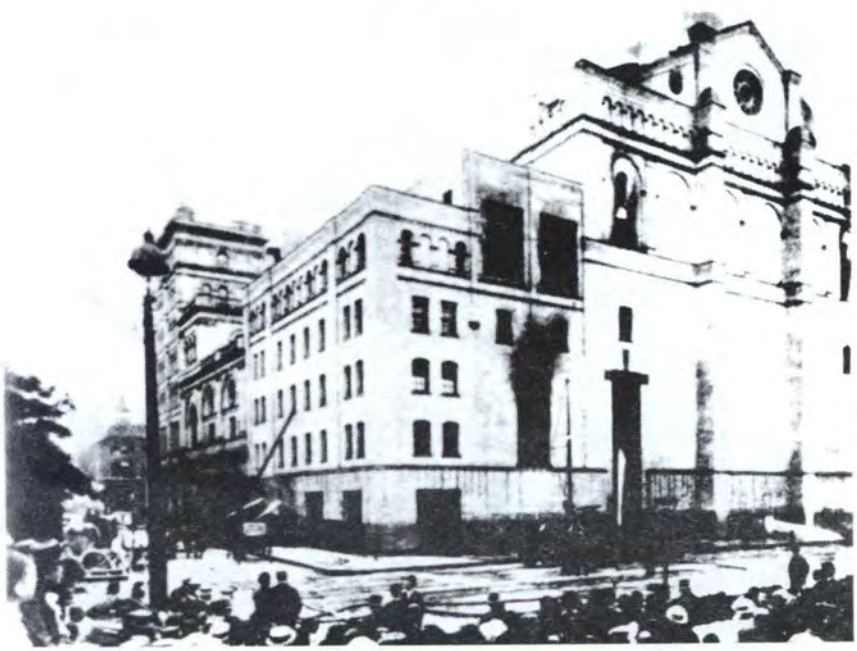

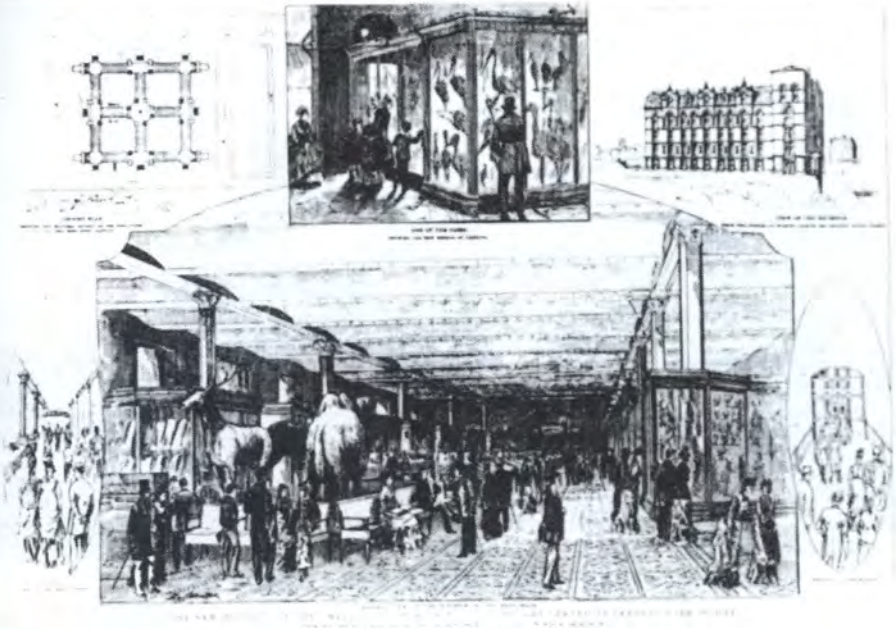

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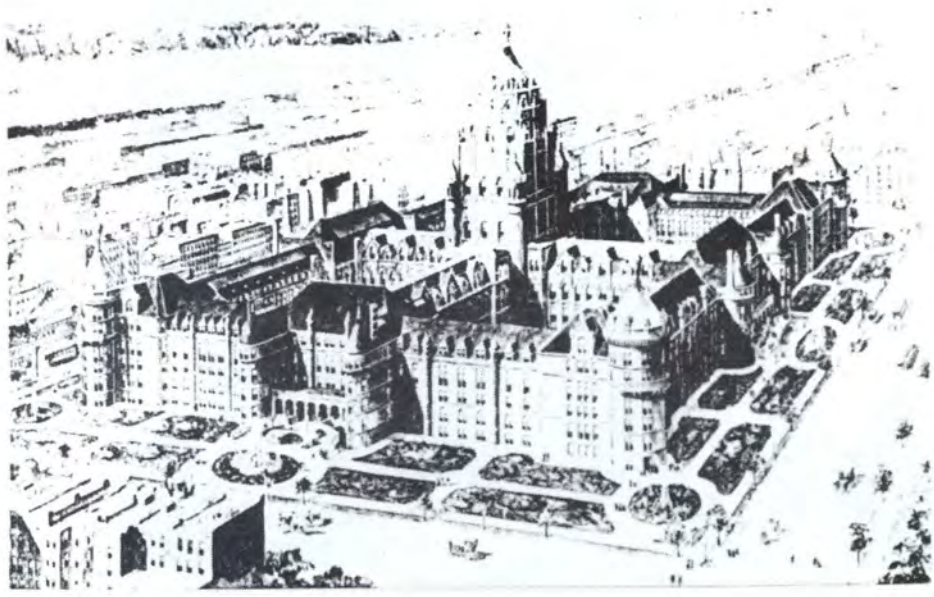

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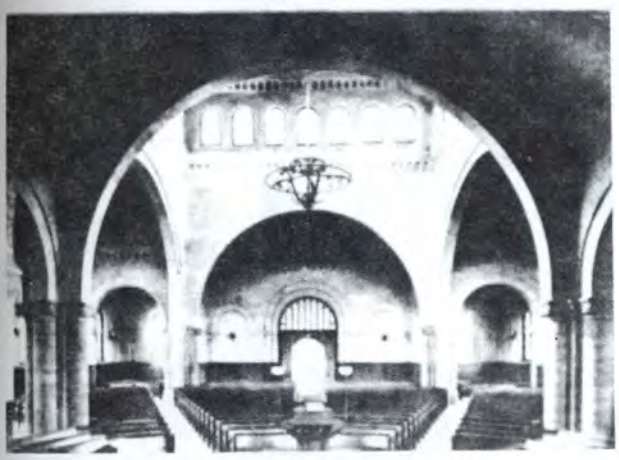

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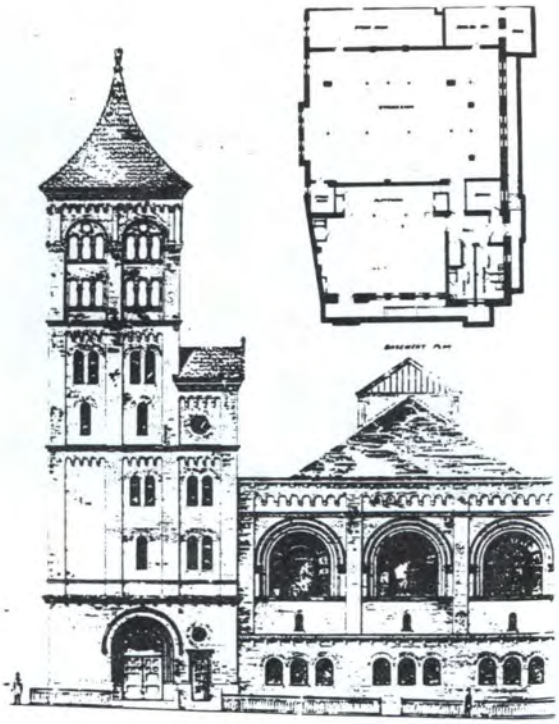
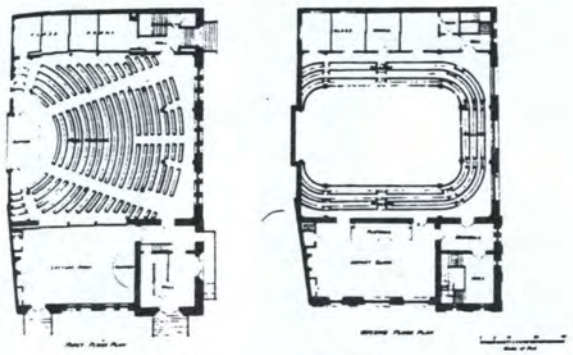


THE BROOME STREET TABERNACLE New York
J.C. Cady & Co. Architects 10 Broadway New York City



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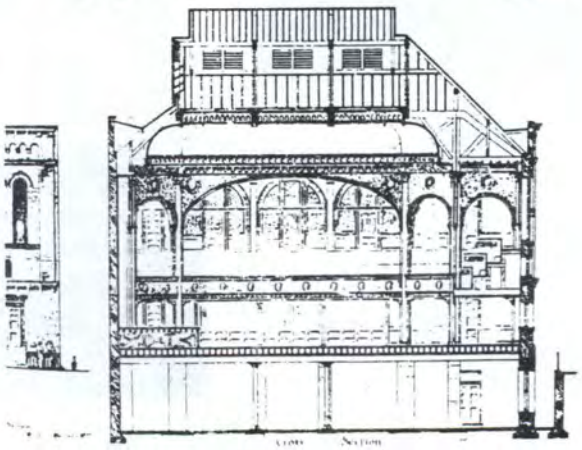

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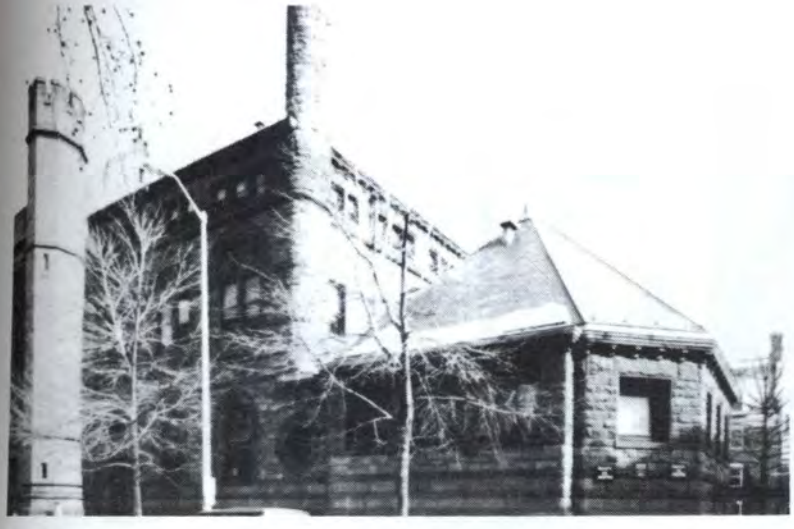

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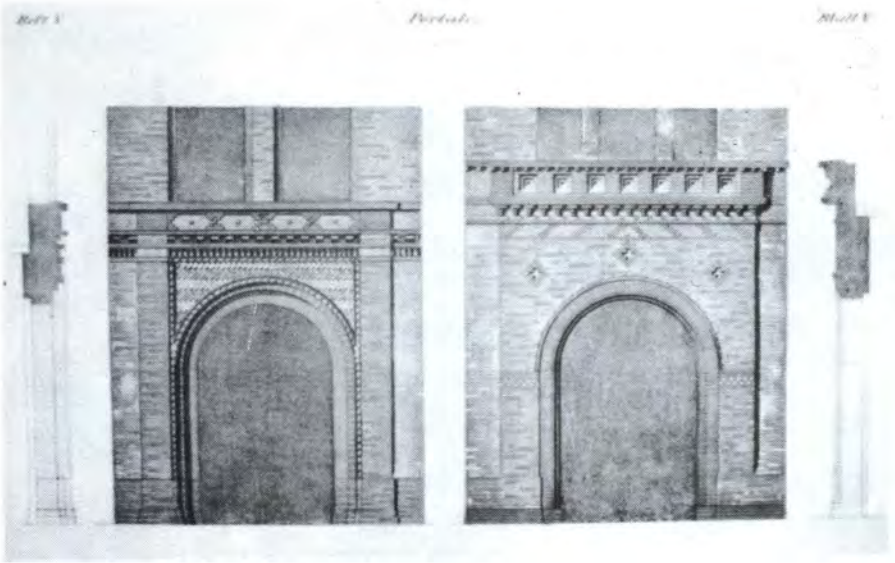

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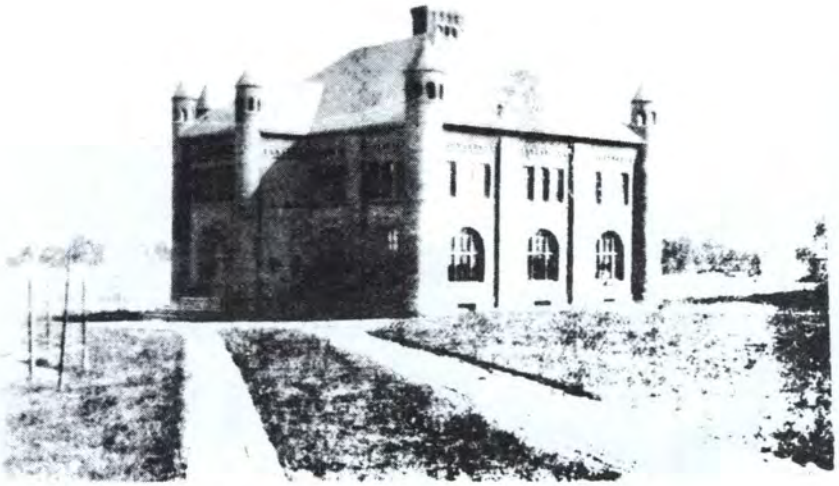


Fig. 33.

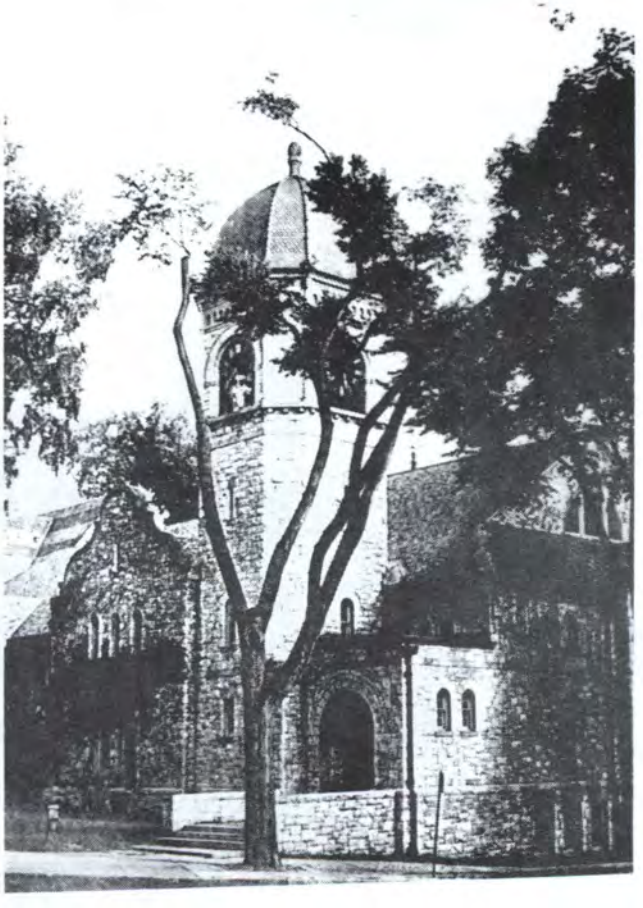
Fig. 35.

Fig. 34.

Fig. 36.

The "Ring," one form of the ...y or shower bath, at the People's ...

The People's Baths, 9 Centre Market Place, under the care of the New York Association for Improving the Condition of the Poor.



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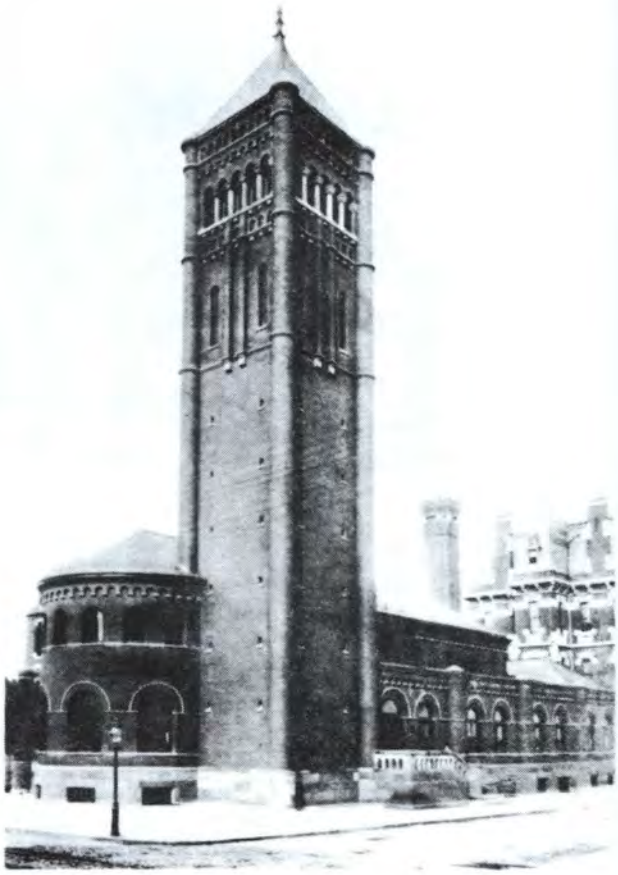

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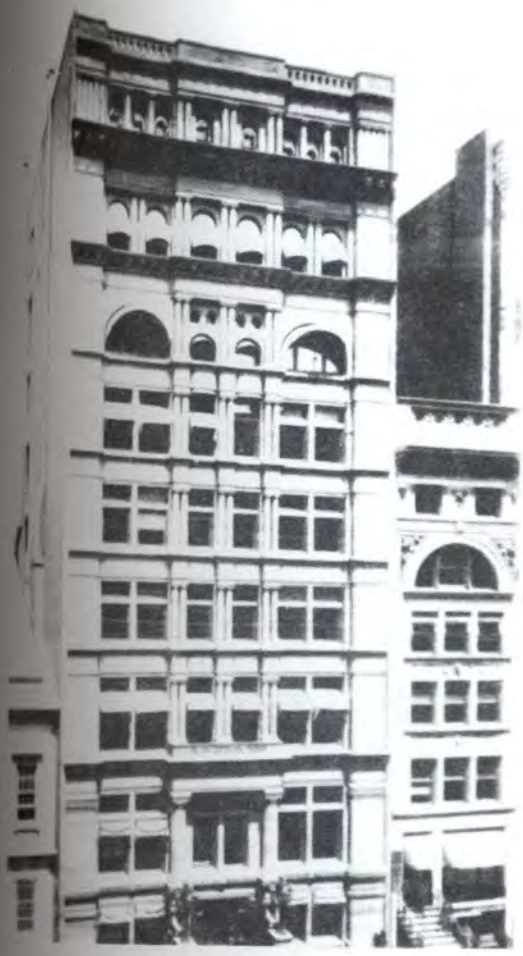

Fig. 42.

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